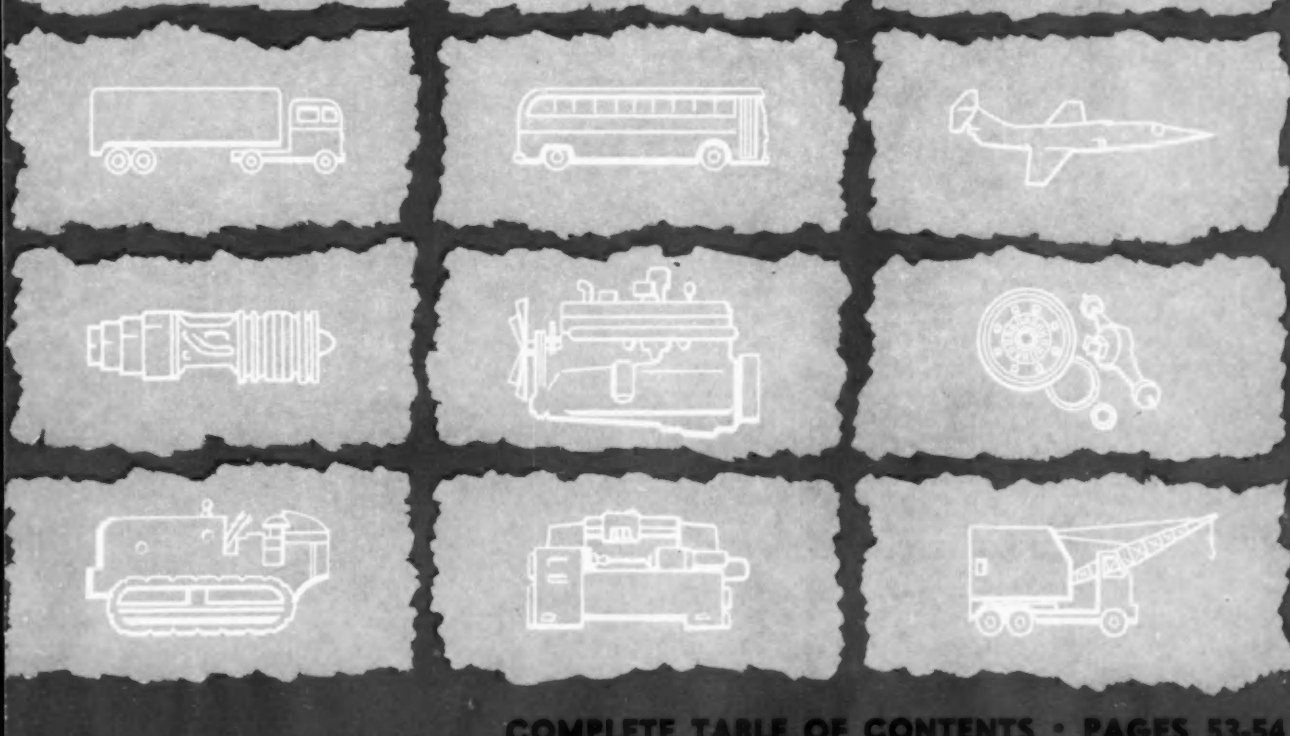
AUTOMOTIVE INDUSTRIES STATISTICAL ISSUE

AND MARKETING GUIDE

A CHILTON PUBLICATION

MARCH 15, 1959

FORTY-FIRST ANNUAL



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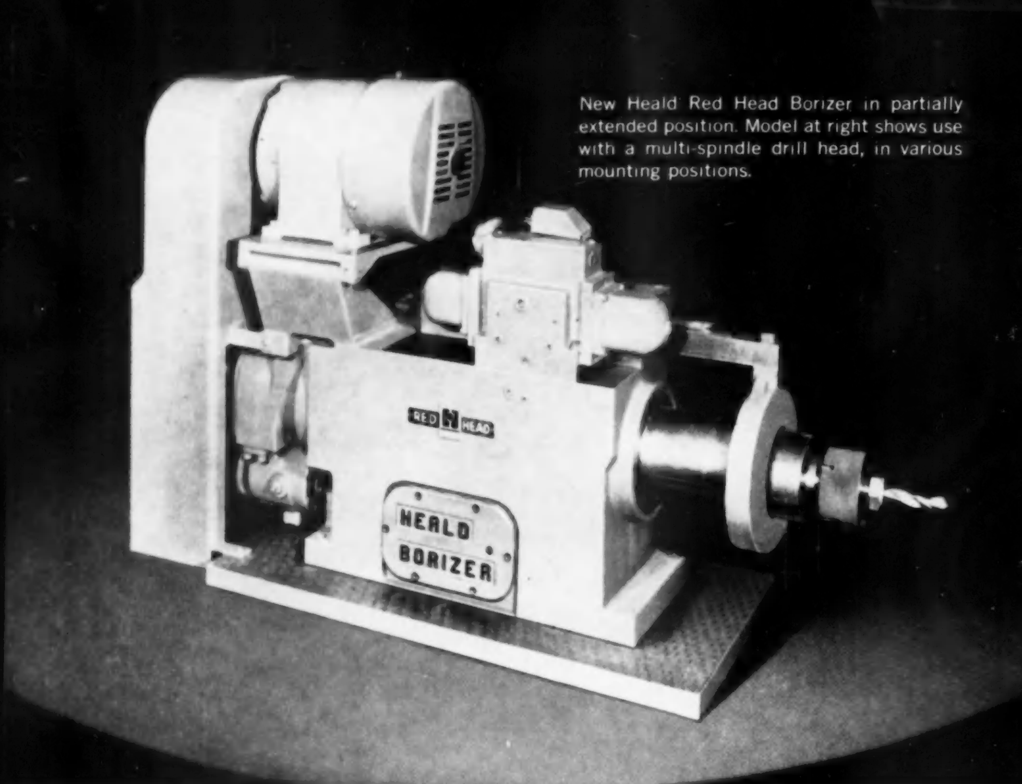
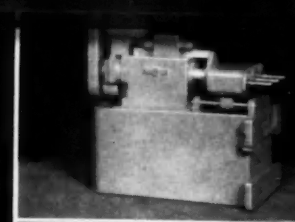
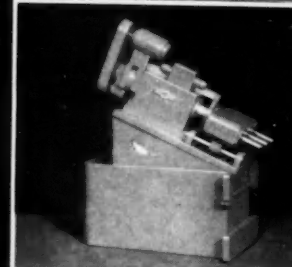
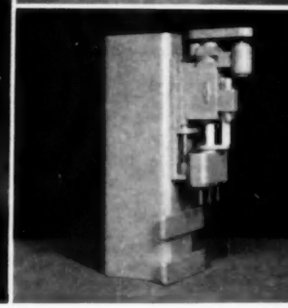
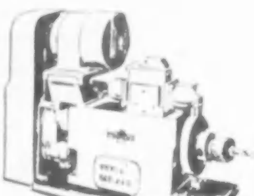


New Heald Red Head Borizer in partially extended position. Model at right shows use with a multi-spindle drill head, in various mounting positions.









Presenting the new Heald

BORIZER

Another NEW PRODUCT by Heald

☐ File for Reference
☑ Send for Bulletin

A completely self-contained unit for rotating and feeding single or multiple tools in automated setups

Designed primarily for driving multiple-spindle drill units, it rotates tools and can supply its own hydraulic power. It feeds tools in to the work at any desired rate and rapid traverses out when the operation is done. In short, the new Heald Red Head Borizer can do just about any drilling, reaming, counterboring, chamfering, and plunge facing operations. Under conditions consistent with its design and purpose it is also capable of boring operations similar to those performed on Heald Bore-Matics.

Its compact design permits grouping a number of units in a variety of positions on a single base machine or along an automated line. And its compact, self-contained construction simplifies relocation for job changeovers. Note also that this unit can be mounted horizontally, vertically or at any desired angle.

Heald Red Head Borizers incorporate the basic design and specifications of precision Red Head Boringheads and are available in four sizes, with strokes of 8, 10, 12 or 15 inches. An adequate thrust range is available for multiple drilling operations. Easily accessible dogs control cylinder stroke and adjustable valve gives infinitely variable feed rates within the feed range. The unit may be operated with integral or central hydraulic systems or with integral or centralized electrical controls.

Ask your Heald engineer for further details, or send for a copy of Bulletin No. 5-2, Issue 1.

HEALD

It PAYS to come to Heald

THE HEALD MACHINE COMPANY

Subsidiary of The Cincinnati Milling Machine Co.

Worcester 6, Massachusetts

Chicago • Cleveland • Dayton • Detroit • Indianapolis • New York

Circle 101 on Inquiry Card, for more Data

YOU CAN CUT INVENTORY INVESTMENT OF MECHANICAL TUBING

If you depend on B&W and your local Steel Service Center . . . because:

... your local Steel Service Center maintains large and diversified mechanical tubing stocks, available to you for immediate delivery

... your local Steel Service Center can help you cut handling and storage costs and maintain production continuity

And when it comes to mechanical tubing, ask for B&W Job-Matched Tubing. For information on how this tubing can reduce your production costs call the local B&W District Sales Office or write for Bulletin TB-352. The Babcock & Wilcox Company, Tubular Products Division, Beaver Falls, Pennsylvania.

AMERICAN STEEL WAREHOUSE ASS'N.

B&W

THE BABCOCK & WILCOX COMPANY

TUBULAR PRODUCTS DIVISION

TA-9000-SMI

Seamless and welded tubular products, solid extrusions, seamless welding fittings and forged steel flanges—in carbon, alloy and stainless steels and special metals

AUTOMOTIVE INDUSTRIES

A CHILTON MAGAZINE — PUBLISHED SEMI-MONTHLY

MARCH 15, 1959 — VOL. 120 No. 6

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MEMBER

National Business Publications, Inc.

Society of Business Magazine Editors

Audit Bureau of Circulations

AUTOMOTIVE INDUSTRIES is a consolidation of The Automobile (weekly) and the Motor Review (weekly) May, 1902; Dealer and Repairman (monthly), October, 1903; the Automobile Magazine (monthly), July, 1907, and the Horseless Age (weekly), founded in 1895, May, 1918.

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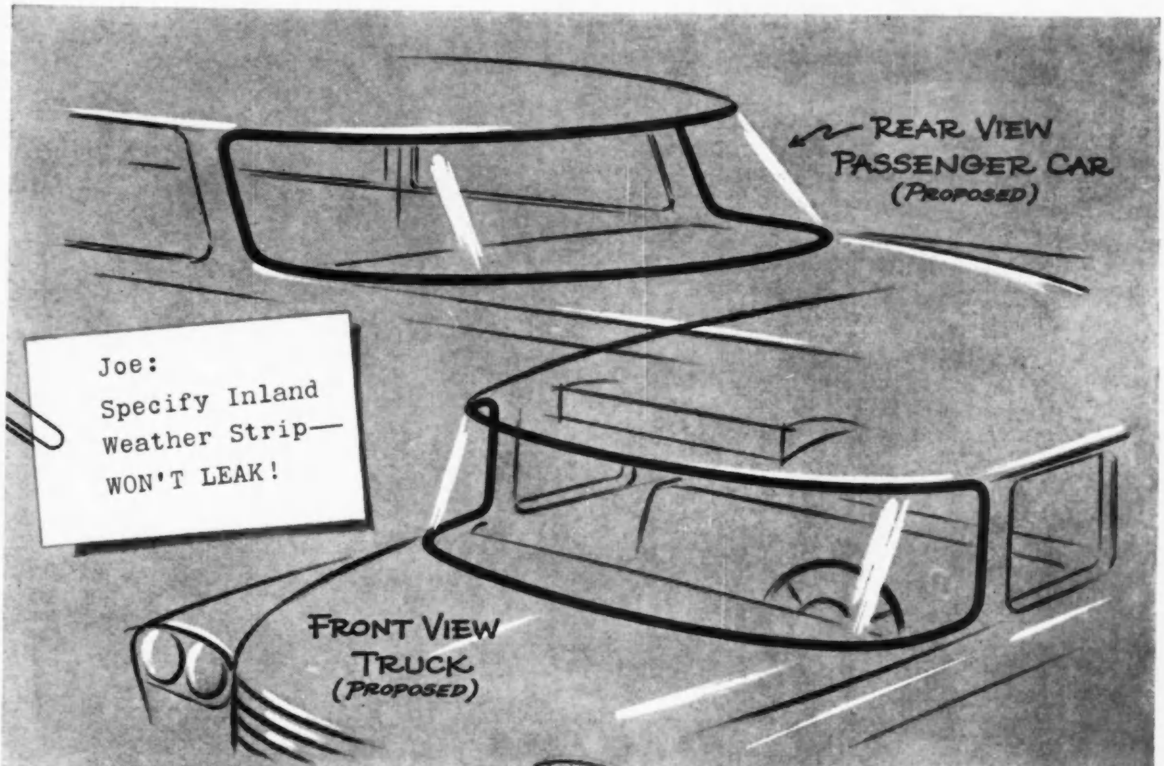
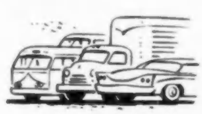
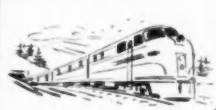
GREATER design freedom with never a leak!



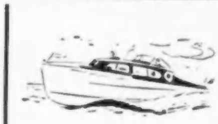


Transportation Industry

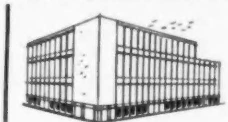


Railway Equipment

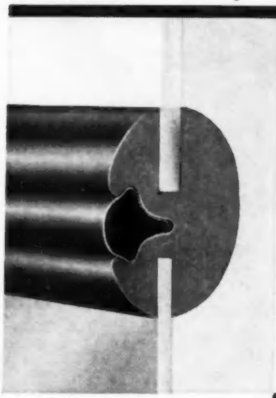
Over-the-road Equipment



Marine Applications



Commercial Structures



Leakproof seal is permanent because filler strip zips into much smaller channel, creating compression.

Yes, you can design tomorrow's vehicles with complete freedom, using versatile, leakproof Inland Self-Sealing Weather Strip for glass of any size or shape.

You seal out the weather when you specify Inland Weather Strip. Shocks or vibrations have absolutely no effect on its weatherproof qualities. The Inland filler strip keeps glass and body panel under compression—saves money, too.

You lower costs of design, assembly, installation. No special cement, binders, or clamps needed. One man can install it easily, quickly. Replacement takes minutes.

Add up these advantages for original equipment or replacement. Write, wire, or phone for details. Standard sizes, or made to your specifications. Catalog on request.

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INLAND

SELF-SEALING WEATHER STRIP

Inland Manufacturing Division, General Motors Corporation, Dayton, Ohio

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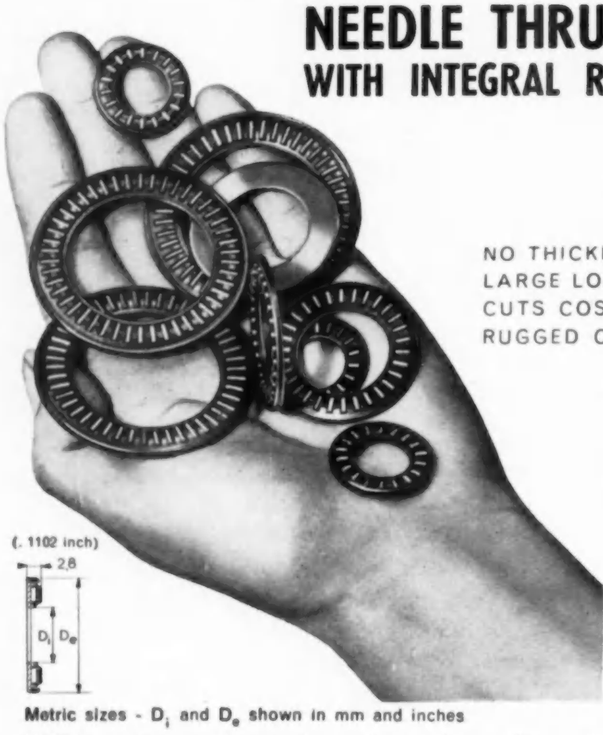
NADELLA

The NEEDLE THRUST BEARING WITH INTEGRAL RACEWAY



- NO THICKER THAN A WASHER
- LARGE LOAD CAPACITY
- CUTS COSTS
- RUGGED CONSTRUCTION

ALSO...
SPECIAL DESIGN
FOR HIGH-PRECISION APPLICATIONS

(. 1102 inch)
2,8
D_i D_e

Metric sizes - D_i and D_e shown in mm and inches

AX	15 28	17 30	20 35	25 42	30 47	35 53	40 60
D_i	15/.5906	17/.6693	20/.7874	25/.9843	30/1.1811	35/1.3780	40/1.5748
D_e	28/1.1024	30/1.1811	35/1.3780	42/1.6535	47/1.8504	53/2.0866	60/2.3622

OTHER SIZES UNDER DEVELOPMENT

NADELLA ALSO MAKE

- Needle rollers
- Needle bushes
- Needle roller bearings
- Cam followers

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ACTA 641.E.70

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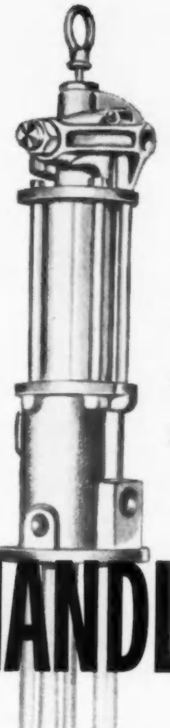
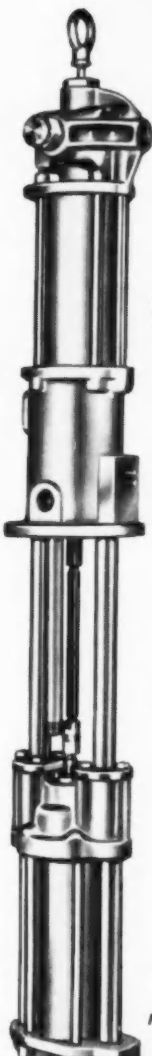
NOW! FASTER SUPER-POWERED PAINTING AND MATERIALS HANDLING...



WITH THE MOST POWERFUL PUMPS OF THEIR TYPE EVER MADE!



NEW ALEMITE "P-78" PUMP

Full 5.4 horsepower! More powerful than any other paint pump on the market, more efficiently designed, more sturdily constructed, the new Alemite "P-78" assures faster, more efficient delivery through long lines and numerous outlets! Pumps paint up to high floor levels . . . eliminates movement of equipment and hand transferring . . . speeds production! Check these "P-78" advantages:

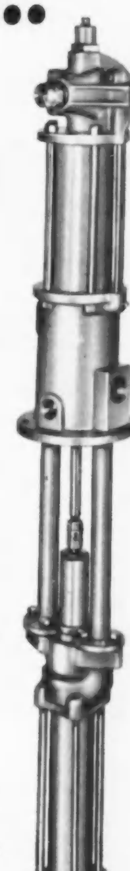
High Volume—models deliver from .4 to .65 gallons per cycle. *Maximum System Capacity*—serves 2 miles of pipeline. *Smooth Pumping Action*—handles all finishing materials, including fast settling acrylic lacquers. *Lightweight*—all-aluminum body weighs only 76 lbs.

"P-78" Pump—3 Models
Low-Pressure (1.4 to 4 ratio)
Medium-Pressure (1.7 to 1 ratio)
High-Pressure (2.2 to 1 ratio)

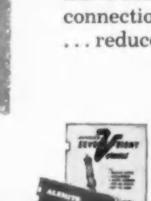
NEW ALEMITE "V-78" VERSATAL PUMP

68% more powerful! Alemite's new 5.4 horsepower materials handling "heavyweight" is specifically designed to dispense heavy materials through restrictive systems . . . wherever pressure losses create a pumping problem. Easily handles most types of heavy mastics, sealers, putty, caulking compounds and hydrostatic spray applications.

Double-action Pumping moves a large volume of material under most difficult operating conditions. *Submerged Pump Tube* retains possible by-pass of materials within original container, prevents mess and waste. *Extra Material Outlet* permits direct connection for larger hose or pipe . . . reduces pressure drop.



"V-78" Pump—3 Models
High-Pressure (24 to 1 ratio)
Medium-Pressure (12 to 1 ratio)
Low-Pressure (4 to 1 ratio)



Write For New Alemite "P-78" and "V-78" Versatal Catalogs!

Symbol of SW Excellence

ALEMITE DIVISION STEWART-WARNER CORPORATION

1826 Diversey Parkway, Chicago 14, Illinois

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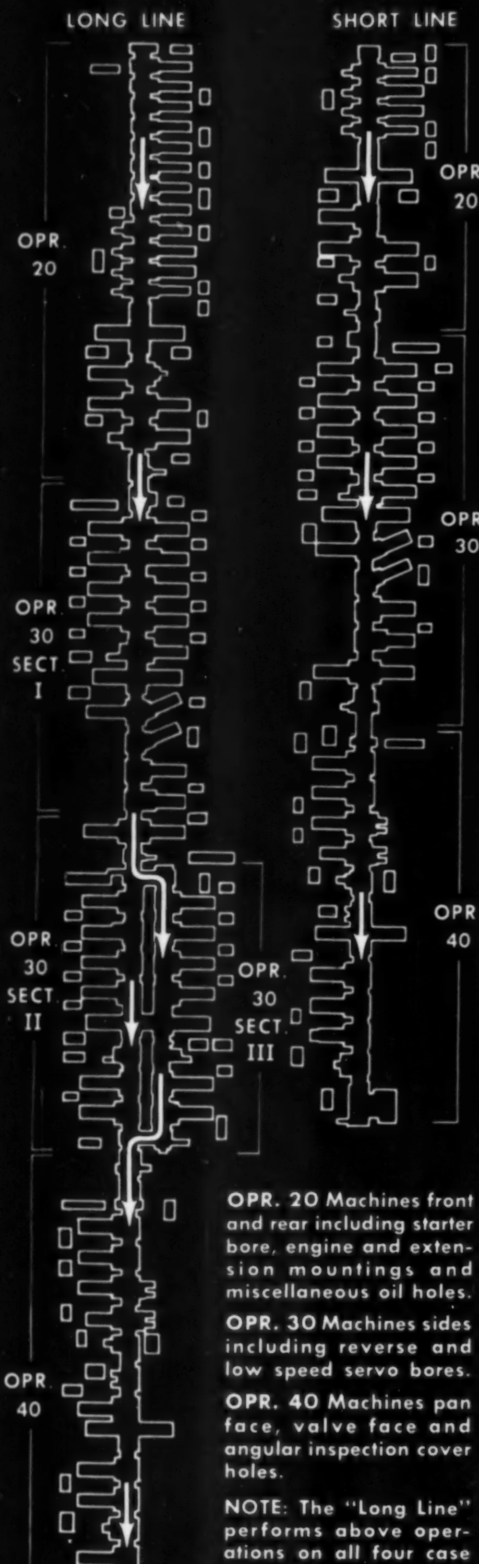
Complete Product Mix Processed On New Cross Transfer-matics



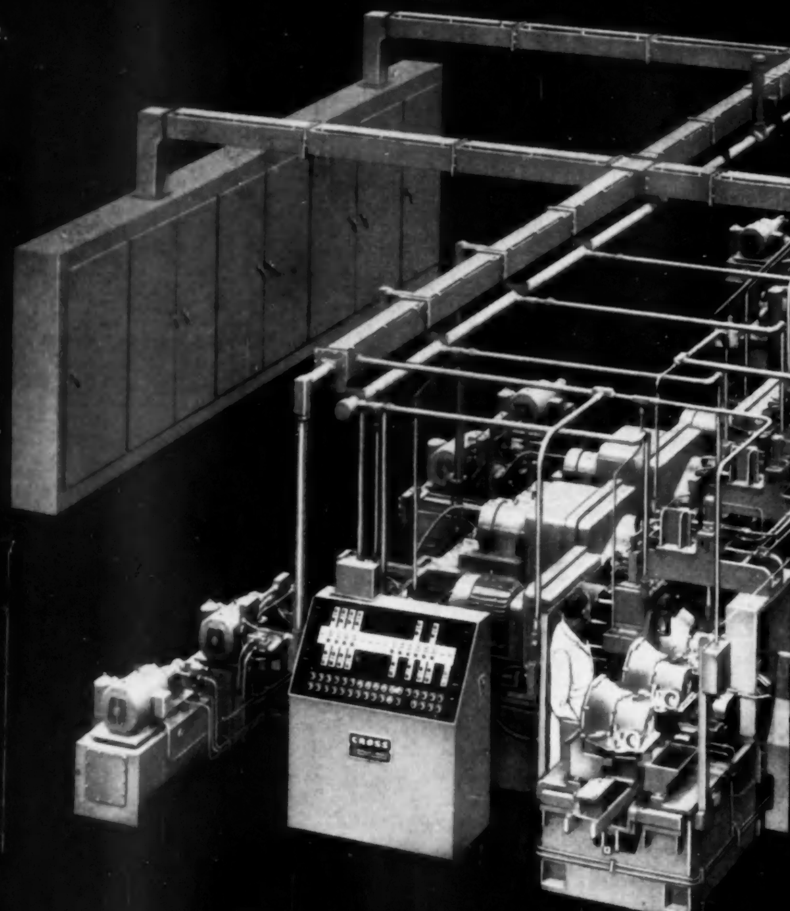
OPR. 20 Machines front and rear including starter bore, engine and extension mountings and miscellaneous oil holes.

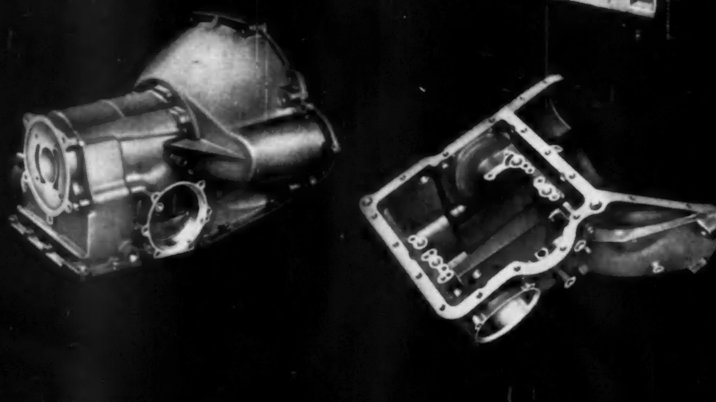
OPR. 30 Machines sides including reverse and low speed servo bores.

OPR. 40 Machines pan face, valve face and angular inspection cover holes.

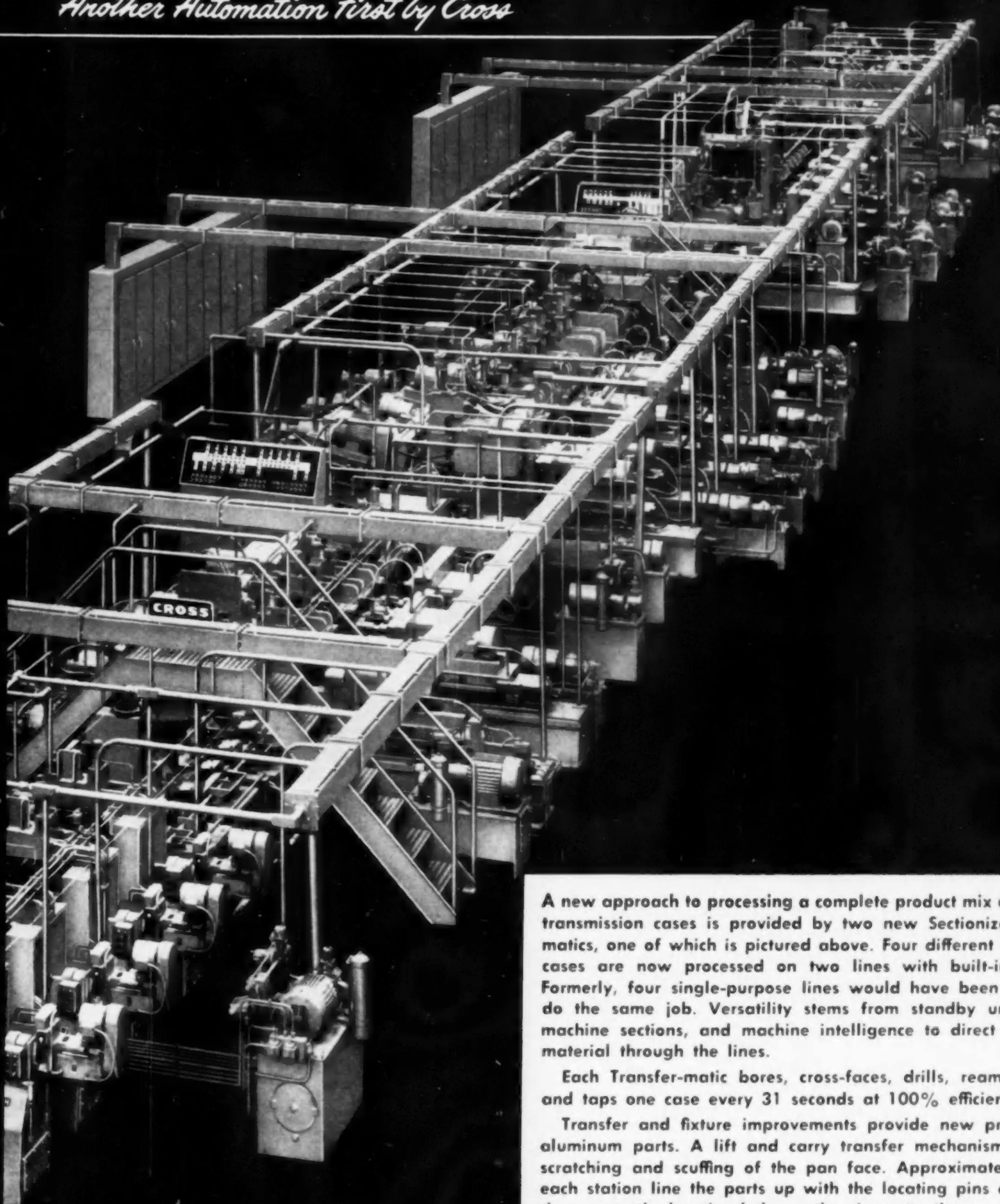
NOTE: The "Long Line" performs above operations on all four case designs. The "Short Line" performs these operations on only a single case design.

Floor Plan Layout of Two New Cross Sectionized Transfer-matics





Another Automation First by Cross



A new approach to processing a complete product mix of aluminum transmission cases is provided by two new Sectionized Transfer-matics, one of which is pictured above. Four different transmission cases are now processed on two lines with built-in flexibility. Formerly, four single-purpose lines would have been required to do the same job. Versatility stems from standby units, off-line machine sections, and machine intelligence to direct the flow of material through the lines.

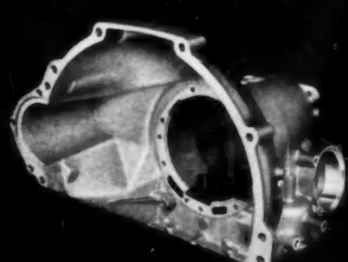
Each Transfer-matic bores, cross-faces, drills, reams, chamfers and taps one case every 31 seconds at 100% efficiency.

Transfer and fixture improvements provide new protection for aluminum parts. A lift and carry transfer mechanism eliminates scratching and scuffing of the pan face. Approximate locators in each station line the parts up with the locating pins and prevent damage to the locating holes as the pins enter them.

Down time is minimized by use of "static" controls since conventional relay maintenance is virtually eliminated. Programmed tool changes with Cross Toolometers and Machine Control Units and a machine communications network facilitate "combined" tool and machine maintenance.

Sectionized machine design insures peak output by feeding parts into the machine behind "down sections."

The Cross "building block" principle and optimum standardization assure highest flexibility for part design changes or re-application of machine units for entirely new part processing.



Established 1898

THE **CROSS** CO.

First in Automation

PARK GROVE STATION • DETROIT 5, MICHIGAN

CALENDAR

OF COMING SHOWS AND MEETINGS

SAE National Passenger Car, Body, and Materials Meeting, Sheraton-Cadillac Hotel, Detroit, Mich. .... Mar. 16-18

Eleventh Western Metal Exposition and Congress, Pan-Pacific Auditorium and Ambassador Hotel, Los Angeles, Calif. .... Mar. 16-20

Manufacturing Chemists' Association Conference, Netherlands Hilton Hotel, Cincinnati, O. Mar. 18-19

SAE National Production Meeting, Sheraton-Cadillac Hotel, Detroit, Mich. .... Mar. 19-20

Institute of Aeronautical Sciences, Flight Propulsion Meeting (classified), Hotel Carter, Cleveland, O. .... Mar. 19-20

American Power Conference, Hotel Sherman, Chicago, Ill. . Mar. 31-Apr. 2

SAE National Aeronautic Meeting, Production Forum, and Aircraft Engineering Display... Mar. 31-Apr. 3

International Automobile Show, Coliseum, New York, N. Y. . Apr. 4-12

Nuclear Congress and Atom Fair, Cleveland, O. .... Apr. 5-10

AWS Annual Technical Meeting and Welding Exposition, International Amphitheatre, Chicago, Ill. .... Apr. 7-9

AFS Castings Congress and Engineered Castings Show, Hotel Sherman, Chicago, Ill. ..... Apr. 13-17

ASTE Annual Meeting, Schroeder Hotel, Milwaukee, Wis. ... Apr. 18-22

Metal Powder Industries Federation, annual meeting and Powder Metallurgy Show, Detroit, Mich. .... Apr. 20-22

ASLE Annual Meeting and Lubrication Exhibit, Hotel Statler, Buffalo, N. Y. .... Apr. 21-23

Lead Industries Association, annual meeting, Drake Hotel, Chicago, Ill. .... Apr. 22-23

Association of American Battery Manufacturers, annual convention, Americana Hotel, Miami Beach, Fla. .... Apr. 22-25

American Zinc Institute, annual meeting, Drake Hotel, Chicago, Ill. .... Apr. 23-24

National Chamber of Commerce, annual meeting, Washington, D. C. .... Apr. 26-29

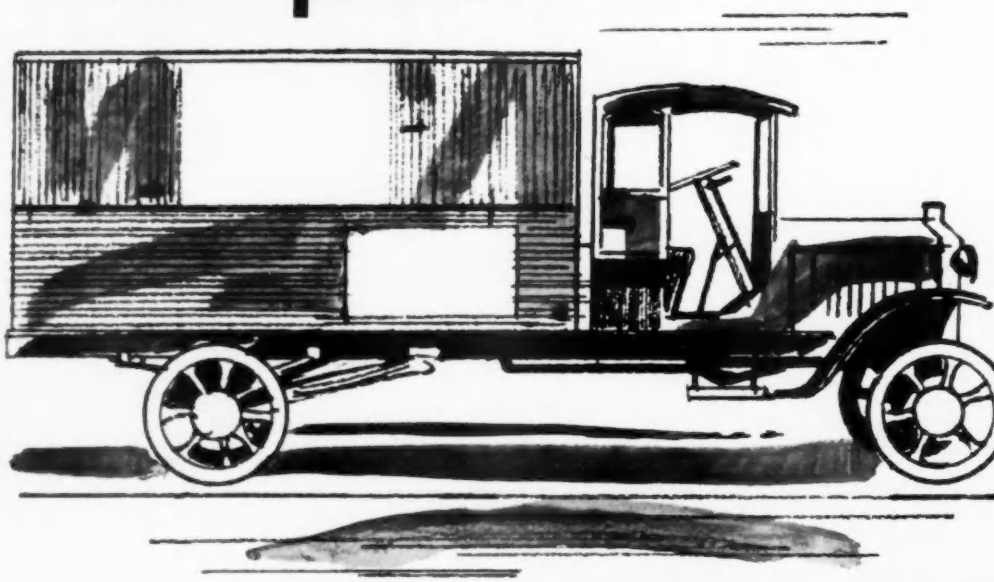
ASME Metals Engineering Div. Conference, Albany, N. Y. Apr. 29-May 1

ASM Southern Metals Conference, Augusta, Ga. .... May 4-6

National Industrial Production Show, Toronto, Canada ...... May 4-8

Industrial Waste Conference, Purdue Univ., Lafayette, Ind..... May 5-7

Delivering lo$t profit$?



You can't afford to deliver your goods in obsolete equipment; that would be poor economy and tough on your name.

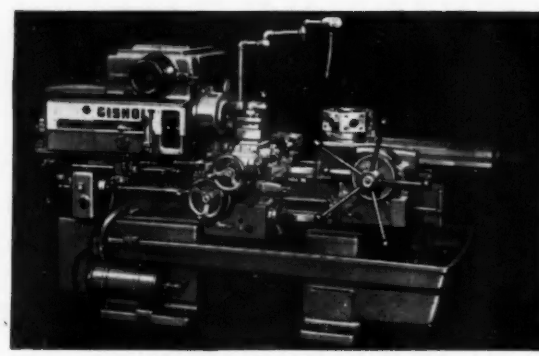
But what about obsolete production equipment? That is out of sight, but it delivers a far greater loss in wasted time and manpower, excessive unit costs and reduced quality.

You might be surprised how easy it is to turn these losses into profits with the self-liquidating production advantages of a modern Gisholt Turret Lathe.

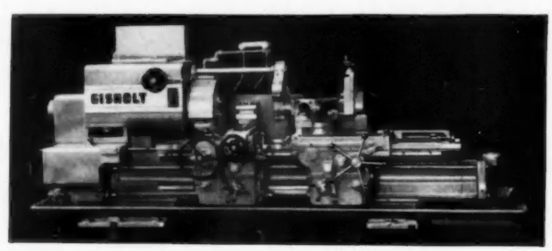
Here is the capacity with the versatility you need to cut critical unit costs on a wide variety of tough jobs. Here is the easy operation you need with the easy setup to minimize tooling and change-over time. Here is the extreme accuracy you need to maintain closest tolerances and highest quality. Here is the extra power with the rigidity to take full advantage of modern cutting tools.

Here are all the advantages you need to keep ahead of demands for higher, faster production and lower costs.

Ask your Gisholt Representative about Gisholt Ram and Saddle Type Turret Lathes—how they can be put to work in your plant earning extra profits, paying for themselves. Call him today or write for literature.



Gisholt Ram Type Turret Lathe



Gisholt Saddle Type Turret Lathe

GISHOLT MACHINE COMPANY

Madison 10, Wisconsin

MASTERLINE GISHOLT SINCE 1887 · GISHOLT

Investigate Gisholt's Extended Payment and Leasing Plans

Turret Lathes • Automatic Lathes • Balancers • Superfinishers • Threading Machines • *Factory-Rebuilt Machines with New Machine Guarantee*

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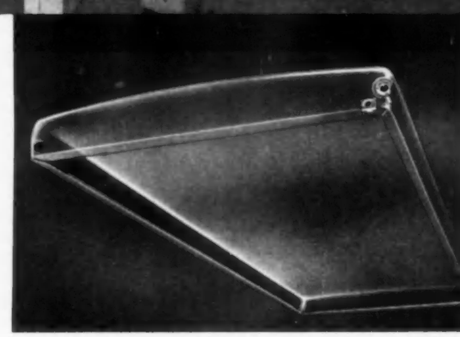
Any size refrigerator doors—the easy way



Close-up of refrigerator door panel shows operations performed on the line. Right corner is gas annealed and embossed. Three holes are pierced in the piece, and hinge pin retainer and nut stop are automatically welded into exact position.

Another Federal Packaged Production Line goes into action

This latest Federal/Warco Packaged Production Line automatically anneals, embosses, pierces and welds refrigerator door panels of varying sizes, either right- or left-hand, with no change in tooling at a rate of 225 doors per hour.

What's more, this line is unitized . . . stations are put together in sections so the line can be altered to meet design changes in later models. All added parts, such as thimbles and nuts, are fed from hoppers, automatically positioned and welded into place.

If you are making metal products that require several operations, why not ask a Federal/Warco engineer in to show you how a Packaged Production Line can put you in a better competitive position.

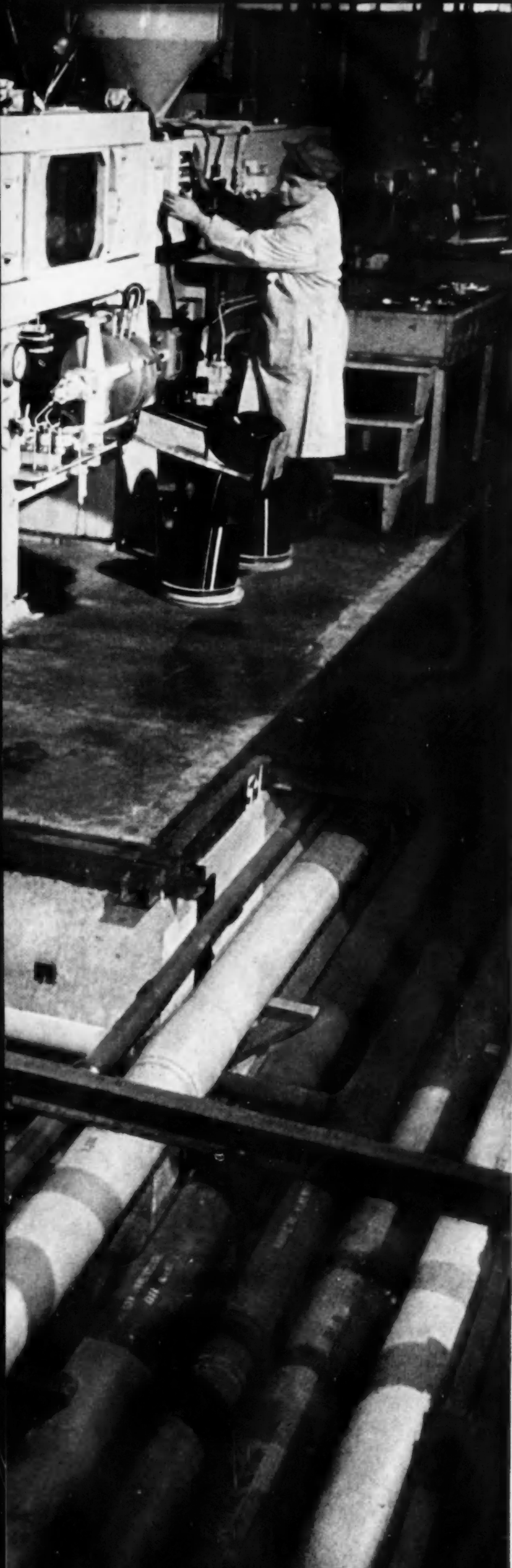
Federal / Warco
PACKAGED PRODUCTION LINES

THE FEDERAL MACHINE AND WELDER COMPANY - WARREN, OHIO

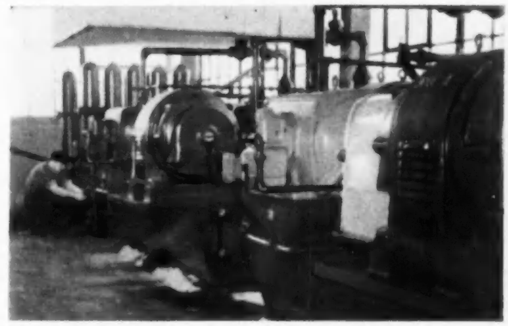
AFFILIATED WITH BERKELEY-DAVIS, INC., DANVILLE, ILLINOIS, MANUFACTURERS OF AUTOMATIC ARC WELDING EQUIPMENT.

Circle 117 on Inquiry Card, for more Data

Circle 118 on Inquiry Card, for more Data →



High-Pressure Pumps, below, each handle 54 gpm of Sunvis 931 at 2500 psi. Unique closed-loop hydraulic system, left, features color-coded piping.



NEW CENTRAL HYDRAULIC SYSTEM PROTECTED BY SUNVIS 931 OIL

The new variable-pressure hydraulic system at Columbia Records in Bridgeport, Conn., delivers oil at 2500 psi to as many as 40 injection molding machines. Round-the-clock production of micro-groove records depends on the reliability of this system.

Columbia picked Sunvis 931 because their tests and experience have shown it doesn't form carbon or leave harmful deposits...even after years of use. Because of their long life, Sunvis 900 oils are the least expensive oils you can buy for tight circulating systems.

This is just part of the story about Sunvis 900 oils. Why not talk them over with your Sun representative the next time he calls. Or write to SUN OIL COMPANY, Philadelphia 3, Pa., Dept. I-32.

SUNOCO ®

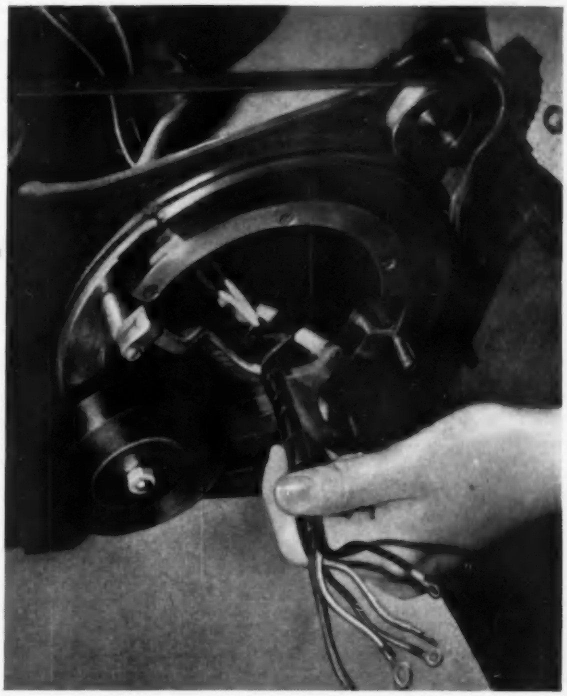
INDUSTRIAL PRODUCTS DEPARTMENT

SUN OIL COMPANY

Philadelphia 3, Pa.

In Canada: Sun Oil Company Limited, Toronto and Montreal

For all the advantages* of plastic electrical tape—



or the —economy of cloth tape...

...bring your insulating problem to

If you have an insulating problem, your Polyken representative can probably solve it. He carries a line of electrical tapes with a multitude of uses, and he knows how they should be used.

Look in the Yellow Pages of the phone book for the Polyken Industrial Tape Distributor nearest you. Or write to the Polyken Sales Division, 309 W. Jackson Blvd., Chicago 6, Illinois.

*Advantages of Polyken polyethylene and vinyl tapes:
Time-saving · Neater splice
Conformable · Less bulky
High dielectric strength · Waterproof

Polyken®

ELECTRICAL TAPES

THE KENDALL COMPANY
Polyken Sales Division

Circle 121 on Inquiry Card, for more Data

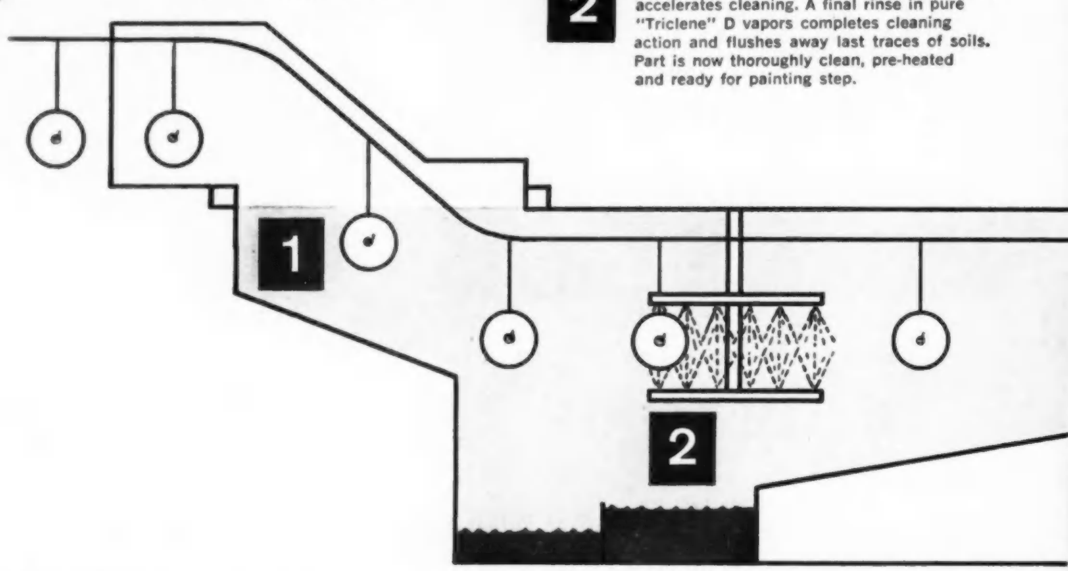
A new process from Du Pont . . .

Vapor degreasing and in one compact unit—with

HOW IT WORKS

1 Greasy and soiled pulley wheel (above) enters degreasing section of unit (No. 1 below) after prior fabricating steps. Cleaning action begins as "Triclene" D trichlorethylene vapors condense on cold part.

2 Mechanical action of spray rinse (No. 2 below) accelerates cleaning. A final rinse in pure "Triclene" D vapors completes cleaning action and flushes away last traces of soils. Part is now thoroughly clean, pre-heated and ready for painting step.



Here are the advantages . . .

SAFE: New process uses paints thinned with nonflammable "Triclene" D solvent. Fire and explosion hazard virtually eliminated!

CUTS COSTS: Solvent, overspray and excess paint are fully recovered—drip loss is eliminated. Integrated cleaning and painting with "Triclene" D trichlorethylene cuts labor and utility costs.

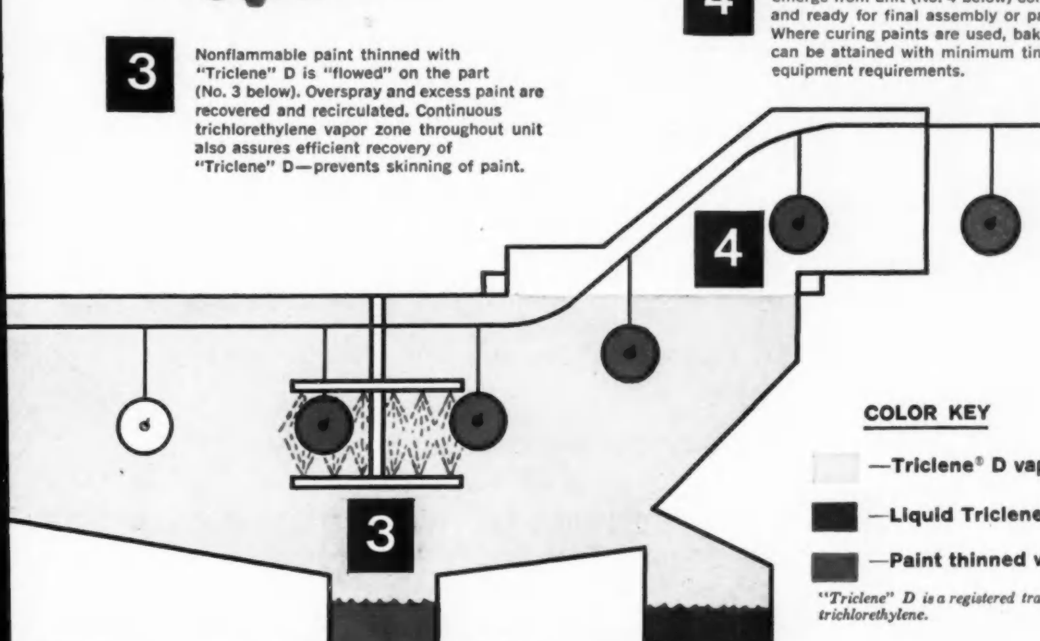
ONE COMPACT UNIT: Simplified equipment saves floor space and reduces finishing time. Unit can be easily adapted to fit in with other production steps both before and after cleaning/painting.

LOW INVESTMENT: No drip pans or spray booths needed. Drying ovens can be eliminated or requirements minimized.

nonflammable painting Triclene® D trichlorethylene

3 Nonflammable paint thinned with "Triclene" D is "flowed" on the part (No. 3 below). Overspray and excess paint are recovered and recirculated. Continuous trichlorethylene vapor zone throughout unit also assures efficient recovery of "Triclene" D—prevents skinning of paint.

4 When lacquer type paints are used, parts emerge from unit (No. 4 below) completely dry and ready for final assembly or packaging. Where curing paints are used, baking can be attained with minimum time and equipment requirements.



COLOR KEY

—Triclene® D vapor zone

—Liquid Triclene® D

—Paint thinned with Triclene® D

"Triclene" D is a registered trademark for Du Pont trichlorethylene.

Technical Report available . . .

Du Pont has prepared a Technical Report describing its new process for integrated cleaning and painting. Included are cost comparisons to help you determine probable cost savings. Get a copy of this Report from your Du Pont representative or your distributor of "Triclene" D trichlorethylene. You can also write to Du Pont, Electrochemicals Dept., Wilmington, Del.

DU PONT

REG. U. S. PAT. OFF.

BETTER THINGS FOR BETTER LIVING . . . *THROUGH CHEMISTRY*

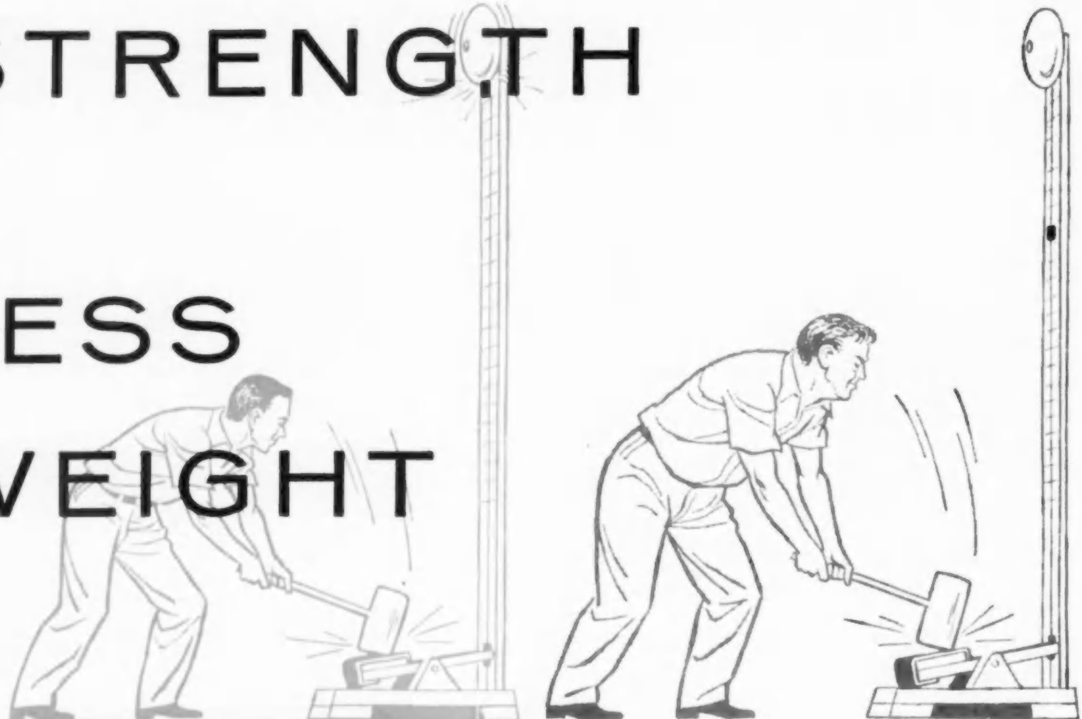
DISTRICT AND SALES OFFICES:

BALTIMORE • BOSTON • CHARLOTTE • CHICAGO • CINCINNATI • CLEVELAND
DETROIT • LOS ANGELES • NEW YORK • PHILADELPHIA • SAN FRANCISCO

Export Division, Du Pont Building, Wilmington 98, Delaware

MORE STRENGTH

LESS WEIGHT



specify

A. W. DYNALLOY

A. W. DYNALLOY Steel provides higher strength per unit of weight . . . lets you cut weight in fabricated products.

Specify DYNALLOY and realize these additional advantages: weldability, easy formability and resistance to corrosion and impact. In products where high strength and low weight are desirable, DYNALLOY will provide you with a means to higher quality production . . . lower costs . . . increased profits. Call your Alan Wood Representative today! He's always available and ready to help.

ALAN WOOD STEEL COMPANY

CONSHOHOCKEN • PENNSYLVANIA

DISTRICT OFFICES AND REPRESENTATIVES

Philadelphia • New York • Los Angeles • Atlanta • Boston • Buffalo • Cincinnati • Cleveland
Detroit • Houston • Pittsburgh • Richmond • St. Paul • San Francisco • Seattle
Montreal, Toronto and Vancouver, Canada—A. C. Leslie & Co., Limited

Circle 123 on Inquiry Card, for more data

Circle 124 on Inquiry Card, for more Data

Circle 125 on Inquiry Card, for more Data

Circle 126 on Inquiry Card, for more Data →

QUALITY

IN STAINLESS STEEL

"FLIGHT OF PROGRESS"
a stainless steel sculpture by Robert Edward Hamilton

Quality in stainless steel starts in the melt shop, where Industry Standards are met – *or missed.*

1 out of every 7 tons of stainless used in the last 15 years came from the melt shop of J&L's Stainless and Strip Division. To achieve that remarkable record as a supplier of semi-finished products, J&L set up its own standards and specifications – far more exact, more precise, *more rigid* than those in general use. Today J&L leads the industry in melting practice standards – the point where quality starts.

Chances are 1 out of 7 you have already enjoyed J&L quality in stainless, without knowing its melt shop origin. Now you can eliminate chance! Newly installed cold rolling and finishing equipment in operation at Louisville, Ohio, makes J&L the most modern *integrated* source for *finished mill products* – stainless sheet, strip, bar and wire. All of traditional J&L stainless quality.

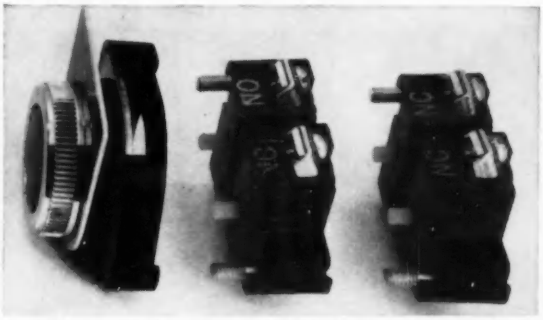
On your next stainless steel order specify "J&L *Consistent* Quality." Don't pay for less.

Plants and Service Centers:
Los Angeles • Kenilworth (N. J.) • Youngstown • Louisville (Ohio) • Indianapolis • Detroit

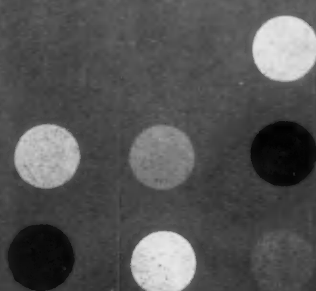
STAINLESS
SHEET • STRIP • BAR • WIRE

Jones & Laughlin Steel Corporation • STAINLESS and STRIP DIVISION • Box 4606, Detroit 34

5

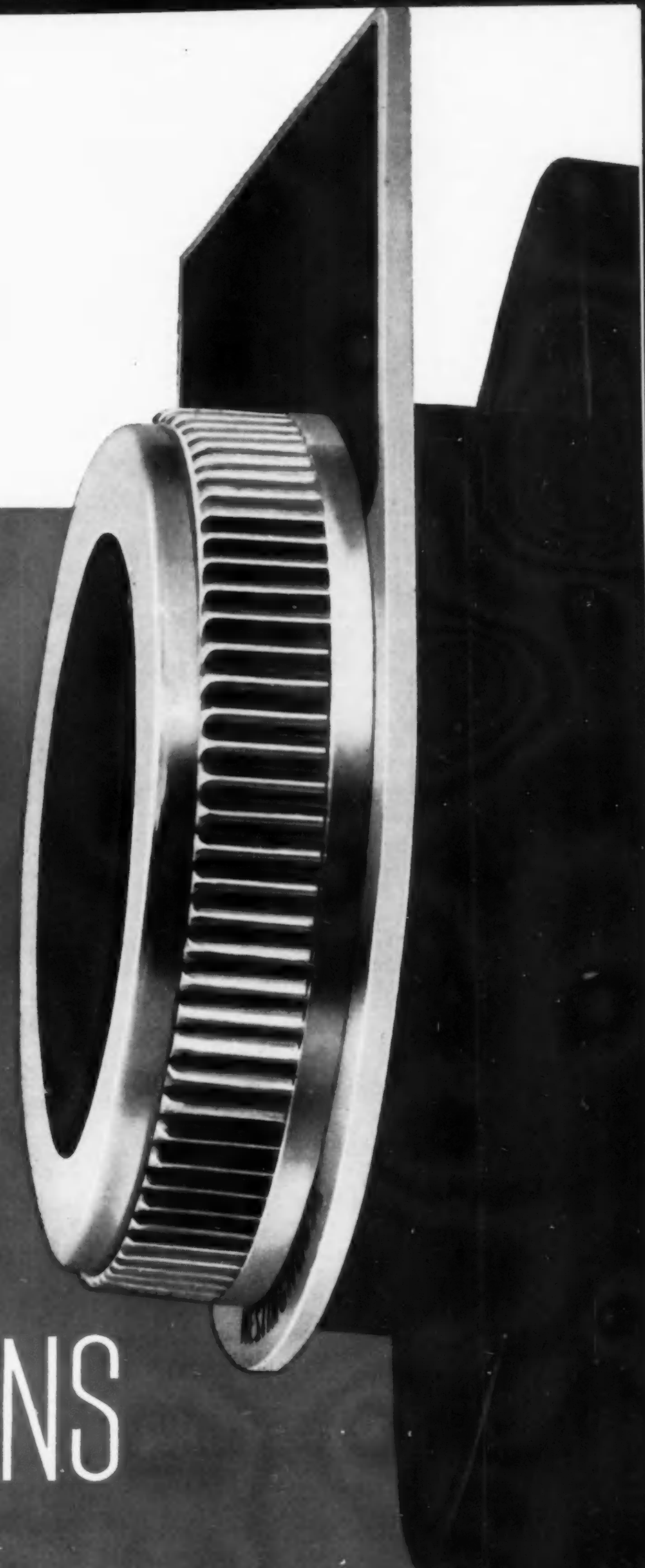


New shallow contact blocks can be easily stacked to give you multiple control circuits. Terminals are angled... easy to get at with a screwdriver, even when blocks are stacked.



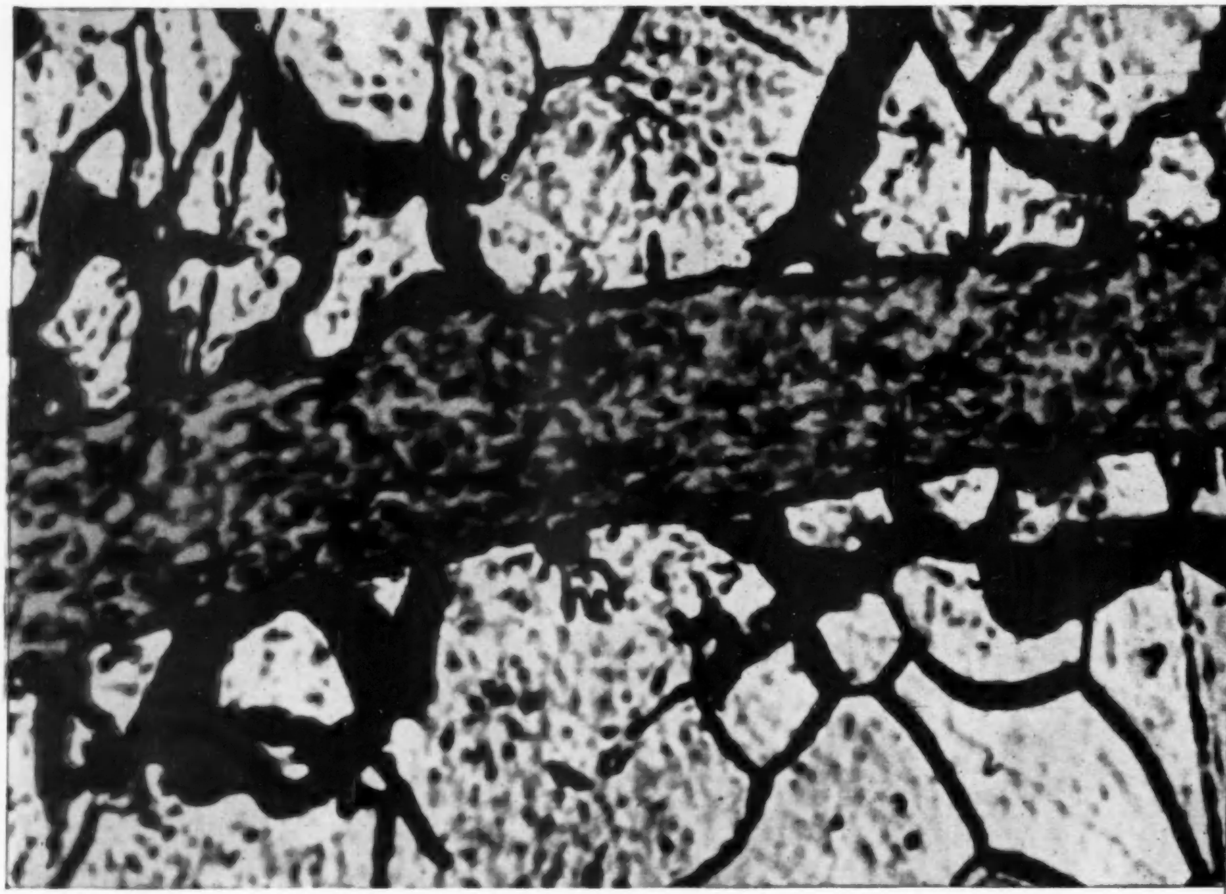
industry's most complete line of pushbuttons

FLUSH PUSH-BUTTONS



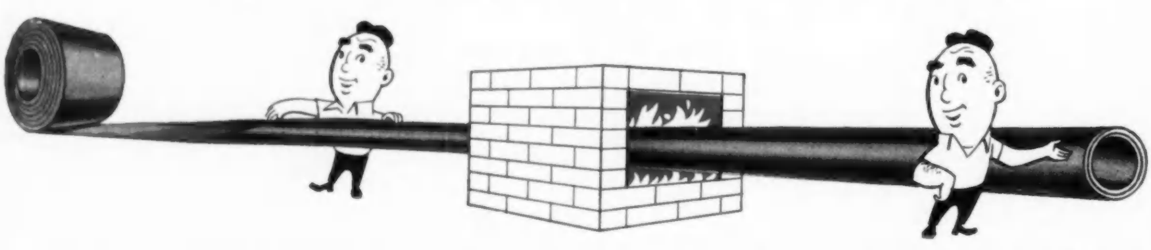
J-30288

WHY BUNDY LEADS IN MASS-FABRICATION:



COPPER BRAZING...Another reason why

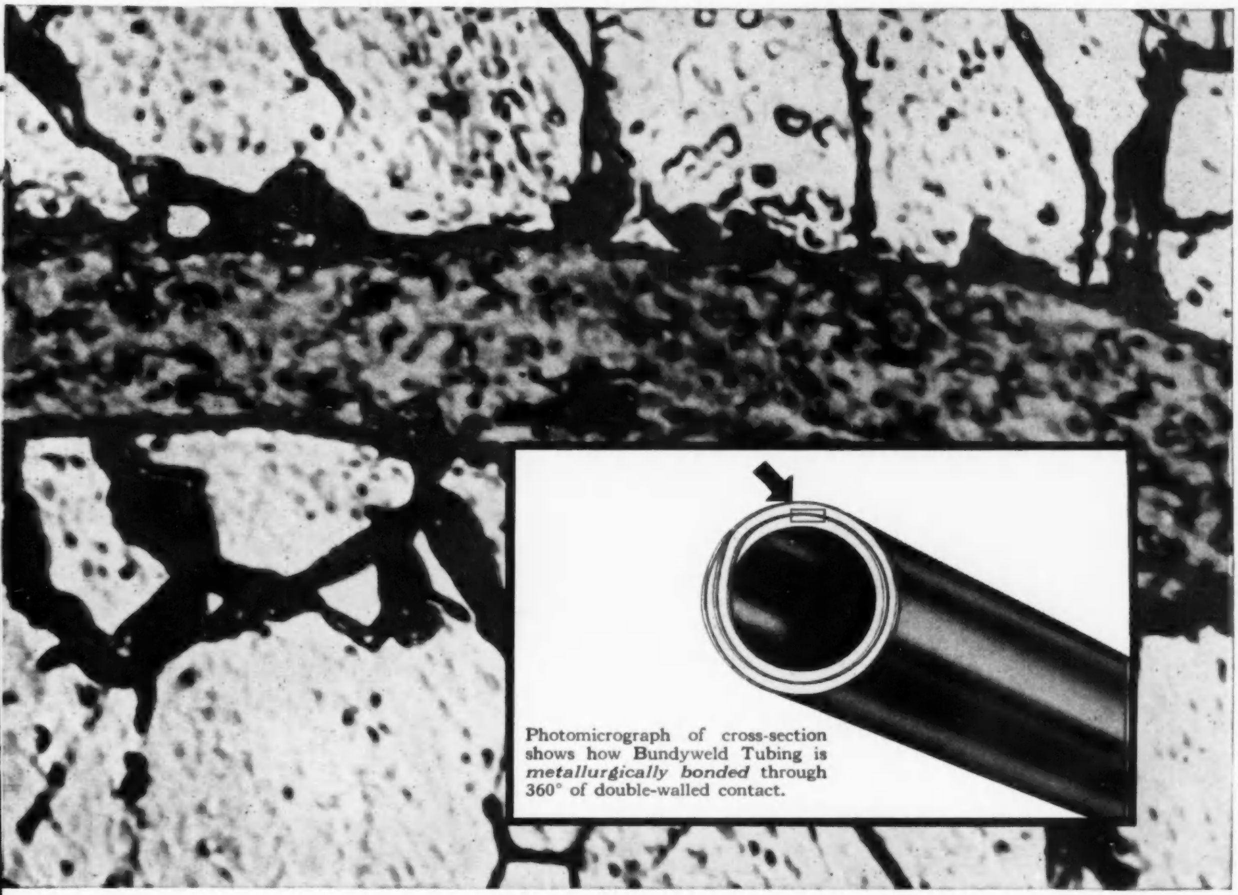
And Bundyweld can be mass-fabricated even in the most complex shapes—at a low unit-cost which results from three Bundy advantages:



Bundyweld starts as a single strip of copper-coated steel. Then it's continuously rolled twice around laterally...

into a tube of uniform thickness, and passed through a furnace where copper coating fuses with basic steel.

Result: Bundyweld Tubing—double-walled, beadless, metallurgically bonded through 360° of wall contact.



Photomicrograph of cross-section shows how Bundyweld Tubing is *metallurgically bonded* through 360° of double-walled contact.

Bundyweld prevents hydraulic leakage

This tubing was passed through a furnace where its copper coating *fused* permanently with base steel. It's just one of three reasons why Bundy® leads in the modern art of mass-fabrication.

Bundyweld Tubing® is copper-brazed to stay *leak-proof by test*. It stands up through brutal shock and punishing vibration . . . still handles high-pressure hydraulics with perfect safety. No wonder Bundyweld is used on 95% of today's cars, in an average of 20 applications each.

Free design service is yours at Bundy. Engineers famous for solving tricky tubing problems will work with you at any stage in the creation of a product; help you get parts at lowest unit cost.

Expert fabrication service is another Bundy specialty. From multiple-bend fuel lines to tiny oiler tubes, skilled technicians will turn out parts to your specifications; deliver them on time, ready to use.

Find out how it pays to check *first* with Bundy on any tubing problem. Call, write or wire us today!

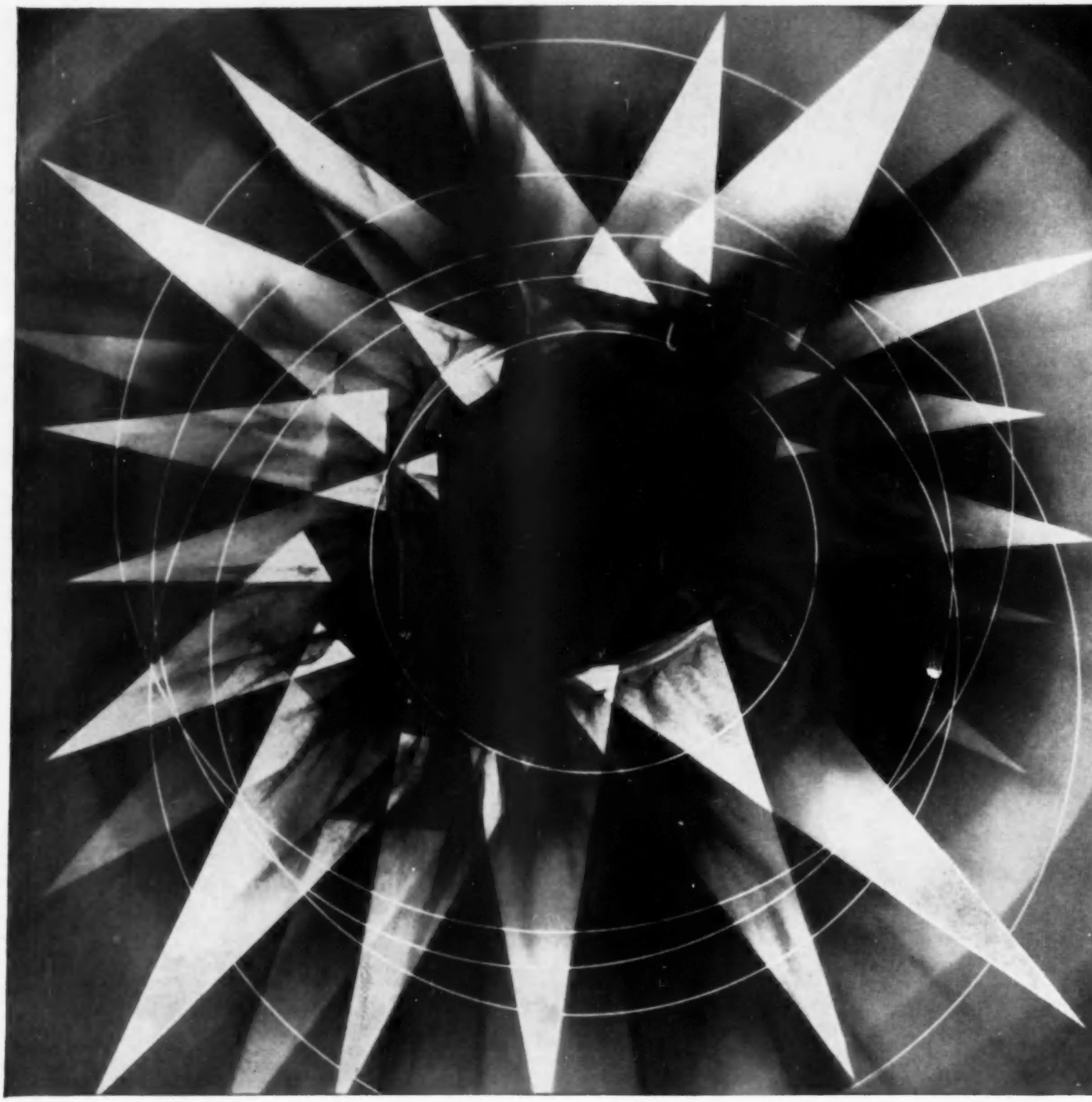
BUNDY TUBING COMPANY • DETROIT 14, MICHIGAN

WORLD'S LARGEST PRODUCER OF SMALL-DIAMETER TUBING • AFFILIATED PLANTS IN AUSTRALIA, ENGLAND, FRANCE, GERMANY, AND ITALY

There's no real substitute for

BUNDYWELD® TUBING

Bundyweld and Bundy specialty tubings are sold through distributors in principal cities



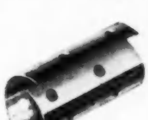
6 alloys = 95% of today's engine bearing requirements

This group of sleeve bearing alloys permits the engineer to design for all conventional commercial applications. At the same time, he can meet his performance and cost requirements.

Each of these alloys has been thoroughly proved and accepted by leading engine builders. Our production of millions of sleeve bearings each year assures you of the highest quality, efficiency and economy. Complete engineering service. A copy of the "Sleeve Bearing Design Guide" will be sent free on request. Address:

FEDERAL-MOGUL DIVISION

FEDERAL-MOGUL-BOWER BEARINGS, INC., 11037 SHOEMAKER, DETROIT 13, MICHIGAN



Spacer Tubes

Bimetal Bushings

Plain Bushings

Precision Thrust Washers

FEDERAL Mogul SINCE 1899

Circle 130 on Inquiry Card, for more Data

WHY CDF CELORON®

with laminated rim reduce noise

Smooth, reliable power transmission assured for modern engine timing requirements

By John A. Petho, Supervisor of Sales Engineering
Molded Products Division
Continental-Diamond Fibre Corp.
A Subsidiary of The Budd Company
Bridgeport, Pennsylvania

The basic requirements for automotive timing gears are smooth transmission of power, quietness and reasonable service life. Depending on the installation these requirements will have varying degrees of importance which can be controlled to a large extent by the selection of the material, design, and quality of workmanship.

Material and design are closely related, but only too frequently changes in the powerplant have been made without corresponding changes in design and material. For this reason, a brief review is given of the design advantages of Celoron, a cotton fabric-based gear material, and of Celoron laminated rim timing gears.

WHAT IS CELORON?

It is the trademarked name of over 30 years standing for a laminated or macerated molded industrial plastic made only by C-D-F for a wide range of gear and mechanical and electrical insulation needs. It designates one of the best, if not the best, high impact molded fabric phenolics for mechanical applications. For timing gears, a phenolic type resin bonds the laminated and macerated cotton fabric into a blank that has the required mechanical strengths. Over the years, we have learned the importance of selecting cotton fabric with the proper weave and weight. Consequently, the design engineer has been given a gear with greater strength, less and more uniform tooth wear, quieter operation.

TYPES OF GEARS MADE FROM CELORON

For original equipment, the laminated rim construction has become standard with two types of construction between the rim and the hub. The gears can be light, medium or heavy duty types. The weight of the fabric used for the gear rim is controlled by the DP of the gear. The WEB gear offers a quality gear with the least possible finishing. The SPOKE gear incorporates many fundamental principles of design long used for quieter operation and longer life. The spokes absorb most of the critical vibrations, have greater resilience and flexibility. However costs are slightly higher.

COMPARATIVE AVERAGE PROPERTIES

	Laminated (rim)	Macerated (web or spoke)
Tensile Strength, psi	10,000	6,500
Flexural Strength, psi	20,000	10,000
Compressive Strength, psi	38,000	25,000
Shearing Strength, psi	12,000	8,500
Izod Impact Strength, flatwise (Notched in ft. lbs. per 1" of notch)	4.0	2.3

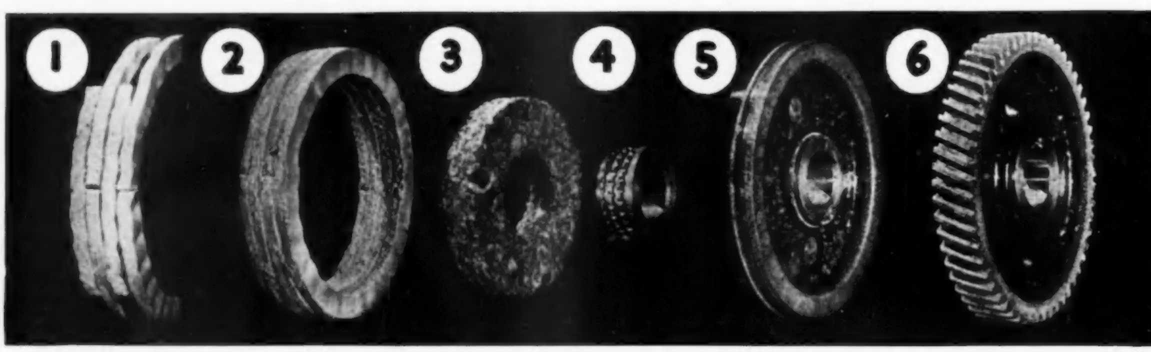
UNIFORM TOOTH STRENGTH

The segments forming the gear rim are punched in such a way that the stronger direction of the fabric is used to form the flank of the gear tooth. This results in a stronger, uniform gear.

WEB FLEXIBILITY

To mold a non-uniform cross section web, laminated construction cannot be used. The treated canvas is macerated to permit shape molding. An important factor of web strength is the size of the particles used. Too large or too small particles will reduce the strength and influence the moldability of the gear. It is necessary to control the weight of each cake of macerated material, assuring a better quality gear.

The molding of the gear web permits the designer to introduce various degrees of flexibility to the gear. In some helical gear installations the service life of the gear can be directly related to flexibility. This is a problem which can be best solved by experience, knowledge of the material and complete knowledge of requirements of the installation. Unfortunately, all these factors are very seldom at the command of the gear designer



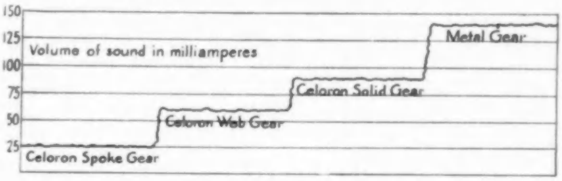
HERE IS HOW a Celoron gear gets its higher tooth strength, more flexibility, greater impact resistance: 1. A special grade of tough cotton is coated with phenolic varnish, then cut into strips and punched into segments. 2. These segments are staggered and piled up into the outer rim which will become the gear teeth. 3. The web or inner ring is made of macerated cloth —gives the gear its side flexibility. 4. The metal bushing is inserted and the make-up is put in to the mold. 5. The resin softens, the coated fabric flows and fills the mold. On hardening, a strong Celoron gear blank is produced. 6. Teeth are then cut in the laminated rim. Tests show they have higher impact strength and more resistance to wear!

TIMING GEARS

level, give longer service

SOUND HARMONICS OF CELORON

There is no mechanical motion without friction. Friction develops vibrations which are in turn transmitted to the air, thereby producing noise. As all sound is characterized by waves of definite frequency and amplitude, these characteristics of frequency and amplitude enter into a consideration of gear noise. Frequency of a gear noise is determined by the number of tooth contacts per second.



Amplitude of a gear noise is the result of a number of factors, such as the material and shape of the gear and gear housing.

Celoron has a low natural tone frequency, and design changes in the structure of the web further reduced the tendency of noise pickup. With a spoke design, it is possible to break up the continuous line of sound between the hub and rim, practically eliminating the pickup and amplification of sound.

HORSEPOWER RATING OF CELORON

Because Celoron is a non-metallic material, when calculating the horsepower rating of Celoron timing gears, use this modification in the velocity factor of the Lewis Formula.

$$\text{Velocity factor} = \frac{150}{200+v} + .25$$

$$\text{SWS} = 6000 \times \frac{150}{200+v} + .25$$

$$\text{HP} = \frac{0.000095 \times \text{SWS} \times \text{FW} \times \text{Y} \times \text{PLV}}{\text{DP}}$$

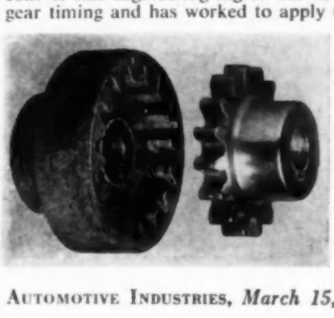
This formula, adopted by the American Gear Manufacturers Association, takes into consideration the characteristics of Celoron. Results obtained in service have supported its use.

POSITIVE KEYING

Celoron which basically belongs to the plastic family has one of the disadvantages of plastics which is a limited amount of compressibility or plastic flow when subjected to a continuous load such as exists at the keyways. To overcome this characteristic and to distribute the loads at the keyway, a steel bushing is molded in the Celoron gears for the bore and the keyway. The steel bushing is anchored to the Celoron, in the molding operation, with staggered interrupted splines instead of the customary diamond knurls. This method is a C-D-F development.

GEARS VERSUS CHAINS

It would be presumptuous of me to set down all the pros and cons of this engineering tug-of war. C-D-F naturally believes in gear timing and has worked to apply Celoron to its fullest use.



CELORON FLEXIBLE COUPLINGS are designed for horizontal as well as vertical drives. The female end of the sprocket type coupling is molded of macerated Celoron which transmits power smoothly and quietly. Write for folder CS-53 with design-ordering information.

Here are a few random quotes, not from plastics engineers, but from automotive design engineers:

"Our experience indicates that timing gears are extremely satisfactory. Probably one of the problems in satisfactory timing gear life is associated with crankshaft stiffness and the fact that the V-8 engine has a relatively short rigid shaft makes a timing gear ideal for this type of engine."

ANOTHER INTERESTING ONE: "From a cost standpoint the gear drive is less expensive than the timing chain drive."

AND ANOTHER: "Even the shortest camshaft drive chains consist of approximately 450 parts. Each of these parts is subject to wear. It is evident that even the slightest trace of wear on each individual part will add up to quite an imposing total for the entire chain. A gear drive for a camshaft has only two parts to wear. Even then the wear is distributed over the entire tooth width instead of being localized."

C-D-F laminated rim Celoron web gears with metal gear.

SUMMARY ON CELORON

The foregoing are a few of the points which make Celoron a desirable material for automotive timing gear applications. There are many more from a cost and customer service standpoint. The material is being continually improved and in its 30 years of existence the only thing remaining of the original material is the name of Celoron. New resins, new fabrics, new methods of molding have made Celoron stronger and lower priced. Semi-automatic molding operations provide open capacity for supplying Celoron. Plant capacity has been steadily increased each year since 1946.

However, all the good inherent properties of Celoron can be destroyed by faulty design. It is always a good policy to discuss the design problems with the manufacturer of the material. Write for test data and samples. C-D-F wants to help you, is a big reliable source of supply!

CONTINENTAL-DIAMOND FIBRE

A SUBSIDIARY OF THE *Budd* COMPANY • NEWARK 2, DEL.

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NEW TUNG-SOL 536

Two-Terminal HEAVY DUTY FLASHER

Replaces the standard

two-terminal flasher

Like the three-terminal 534 and 535, it's built with twice the life of other flashers

For the first time . . . a two-terminal heavy duty flasher that meets the requirements of the biggest part of the truck market as well as the vast majority of passenger car trailer applications — U-haul, boat and house trailers.

The new Tung-Sol 12-volt 536 is identical in performance with the 534 three-terminal type: It flashes one to six 21cp or 32cp lamps without a perceptible change in the flashing rate . . . delivers an instantaneous four-lamp emergency warning . . . lasts twice the life of other flashers . . . insures more positive action and great dependability. Electroswitch Division, Tung-Sol Electric Inc., Newark 4, New Jersey

TUNG-SOL® — *First in Flashers*

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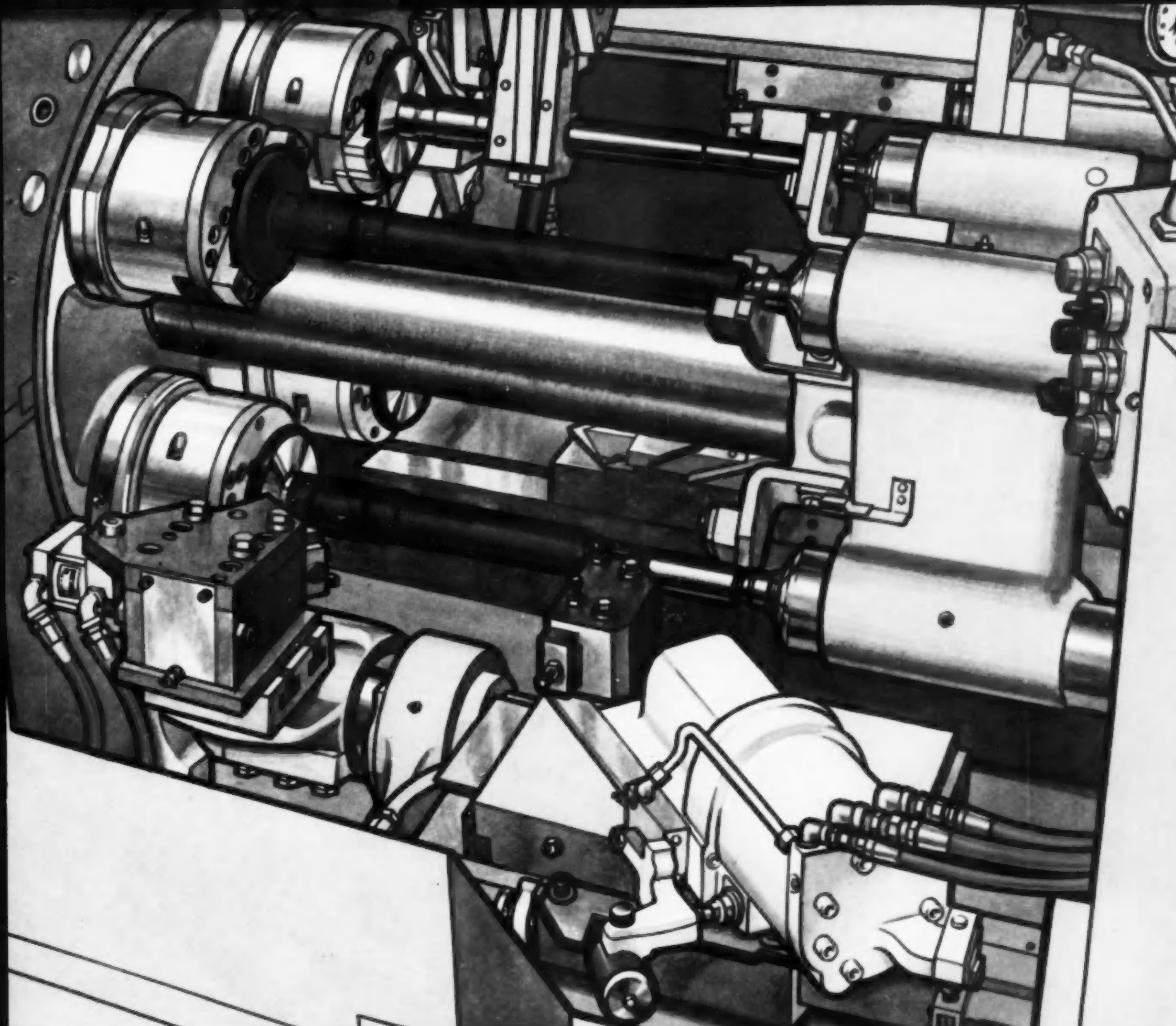
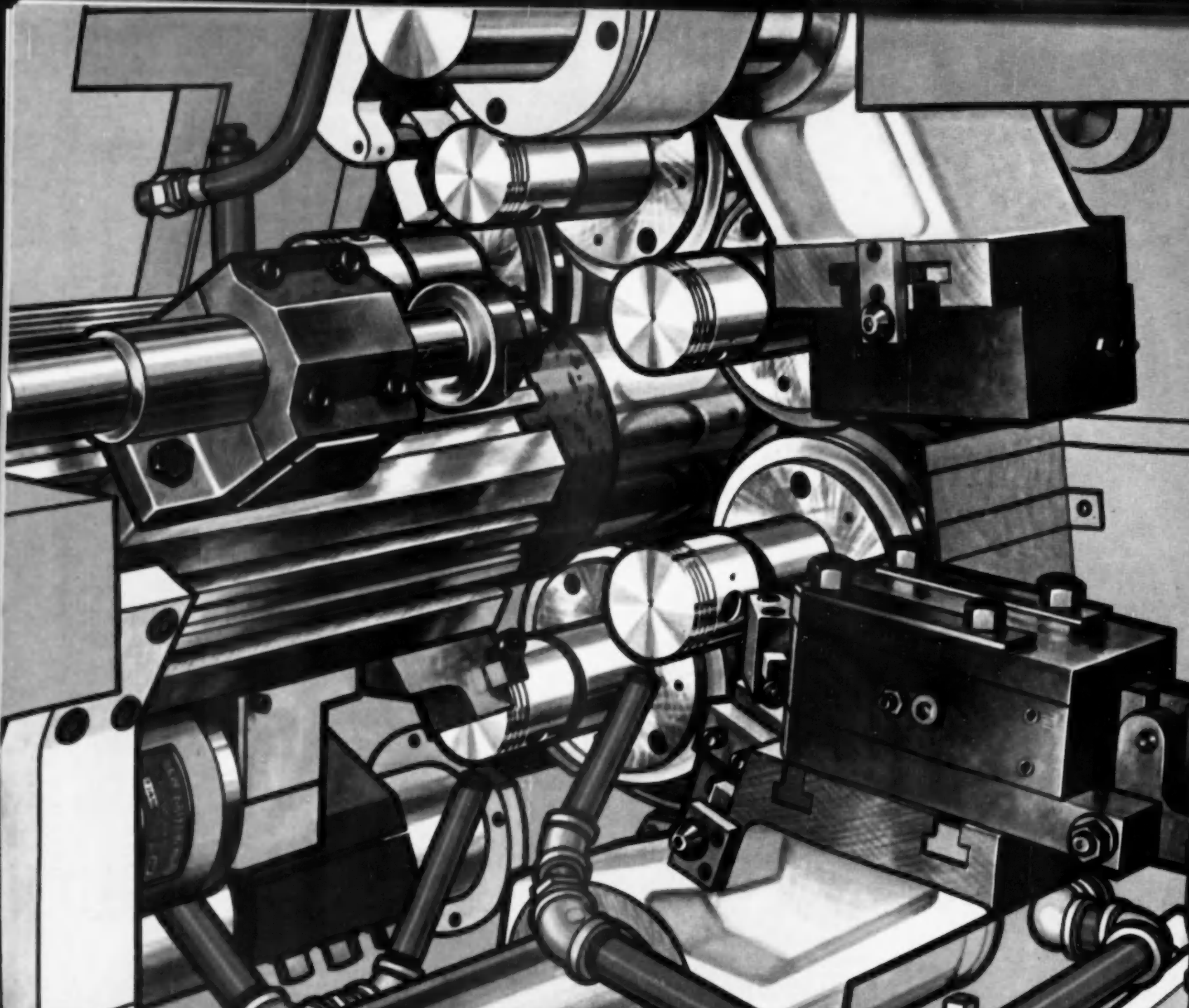




CHEMICALS *help solve engineering, design and production problems*

Today, modern chemicals are of major importance in all phases of automotive engineering, design and production. What chemicals can (or cannot) do will directly affect such "things to come" as new radiators, lower drive shaft tunnels, and central hydraulic systems as well as improved mass production and automation techniques. The future for many major automotive changes looks brighter when modern chemistry and automotive engineering work hand in hand.

You may wish to check certain items in this advertisement and forward to those concerned in your own company.

ROUTE TO:

____

____

____

____

____

TODAY'S ANTIFREEZE RESEARCH HERALDS NEW FORMULATIONS OF TOMORROW

Ever since the roaring twenties, which saw the development of the first ethylene glycol based antifreezes, Dow chemists have been researching the technical problems of the cooling system. Out of that research has come not only constant improvement in today's antifreezes, but hints of what may be in store for the cooling systems of the future.

When an experimental formulation proves out in the laboratory, it is exhaustively tested in banks of radiators, then run in fleet tests before being pronounced "ready for market".

This program at Midland has already helped produce the vastly improved antifreeze formulations of today, as America watched crude substances such as honey, molasses, salt and kerosene, once used to protect against freeze, give way to alcohol mixtures, then to ethylene glycol formulations, the misnamed "permanent" protective fluids.

The word "antifreeze" in Dow's vocabulary can mean any of a number of good things. Reason: engineers have differing ideas as to the relative importance of one or more of the several functions that a good antifreeze must perform. So, Dow will formulate antifreeze to company specifications. For example, Dow supplies automotive companies (for antifreeze fill on the assembly line) formulations that are prepared "on prescription". Or Dow will formulate according to the U.S. Government specifications. Or will furnish you with one of Dow's own formulations. Or will create entirely new formulations to meet particular requirements! That's antifreeze today—what of tomorrow?

What kind of cooling system research would a roving reporter see if he could wander freely through Dow's Automotive Chemicals Laboratories? Remarkable banks of automobile radiators, both conventional and sealed types, running simultaneously for long periods, to test present antifreeze formulations as well as new and experimental ones.

He would see engines with "windows"—thermocouples strategically placed throughout an engine—that make it possible to "see" temperature changes that occur anywhere in the engine, as different cooling system fluids are tested comparatively.

In a more experimental area of cooling system research, the reporter would see a task force at work on "boiling" or ebullient cooling, experimenting with new liquids that, when made to boil and vaporize, dissipate more heat than circulating water. When perfected, these new formulations will provide better cooling and may enable presently wasted engine heat to be utilized in driving a generator or a fan. But, more

FOUR FAMILIAR

INDUSTRIAL SOLVENTS

Chlorothene®, trichloroethylene, perchloroethylene and methylene chloride contribute to better quality control, faster production and better finishes by offering high speed, low cost degreasing and metal cleaning. Important point: supplies instantly available.

importantly from the designer's point of view, they may permit radiator size to be reduced 15% to 20% while eliminating the need for a water pump.

What's ahead? Constantly improved conventional antifreezes, of course. And antifreezes to meet the demands of new engine metals and other near future engineering developments.

Working today to give tomorrow a better brake

When a vehicle weighing tons has to be stopped in seconds by a device weighing mere pounds, there's bound to be a big job for hydraulic fluids. And with the increasing weight and horsepower of modern automobiles, brake fluids are being called on for heavier and heavier service. These fluids must be compatible with many materials—rubber and various metals.

But the biggest problem of course is temperature tolerance. Higher and higher boiling points had to be achieved to withstand the heat generated by braking the greater weight of today's cars and the higher speeds possible in them. Dow research chemists with their special knowledge of glycols and polyglycols, working with automotive engineers, are meeting the challenge of mounting Fahrenheits offered by today's brakes. Dow's heavy duty brake fluid formulations have been the answer to many engineers' braking problems.

* * * *

For further information on the products discussed in this advertisement or on the Automotive Chemicals Section of Technical Service and Development, contact THE DOW CHEMICAL COMPANY, Midland, Michigan, Chemicals Sales Department 900T3-15.

New TRANSMISSION LUBRICANTS make more leg room

He may be looking at a new car design idea! But this new high density fluid will have to run the gauntlet of a rigorous testing program before it will be ready for the road.

New synthetic transmission lubricants now under test at Dow are interesting to even the most exacting automotive engineers. The reason: They can open the way to major transmission, styling and design improvements in the cars of tomorrow.

One immediate possibility is a smaller transmission that will result in a much lower drive shaft "hump" inside the car and correspondingly greater leg room for both front and rear seat occupants. The secret here is that the greater *density* of the new fluids will allow the design of much smaller transmissions. In addition, the new fluids have constant transmission load-carrying ability.

When you have a fluid engineering problem, consider the new synthetic lubricants. Their lubricating ability parallels that of oil. Their density and compatibility with many materials may afford you new engineering opportunities. These amazing new synthetic fluids can affect the future thinking, planning and designing of the automotive industry.

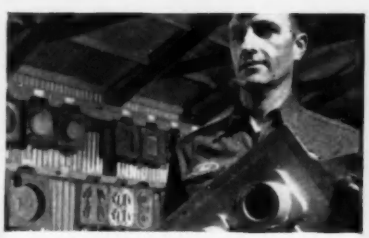
Dow Chemicals Basic to the Automotive Industry

Synthetic Lubricants • Oil and Gas Additives • Antifreeze • Magnesium
Calcium Chloride • Polyols • Glycols • Hydraulic Fluids • Paint Removers
Lubricants • Caustic Soda • Plastic Molding Materials • Paint and Coating Materials

THE DOW CHEMICAL COMPANY
Midland, Michigan

DOW

DOW PRODUCTS *on the automotive front*



PENTACHLOROPHENOL

Ideally, storage warehousing requires inexpensive but durable buildings. And Penta-treated poles perfectly meet the automotive industry's needs in that direction. Penta helps keep wood "healthy"—free from rot and termites. Dow works closely with wood treaters.

CALCIUM CHLORIDE

Keeping ground test roads dust-free and test tracks ice-free are two of the many automotive uses for Dowflake® and Peladow®, hard-working Dow calcium chloride products. Both these products are easy to handle—and are unmatched for all-around efficiency.

AUTOMOTIVE CHEMICALS LABORATORY. At Dow's Automotive Chemicals Development Laboratories in Midland, Michigan and Freeport, Texas, the test tube replaces the test track as the proving ground of new automotive chemicals — antifreeze, hydraulic and brake fluids, lubricants and additives.

Transmit Motion This Positive Low Cost Way!

TOUREK *"STANDARD"* BALL JOINTS

TYPE "A" BALL JOINT

Non adjustable spring type with a light pre-set tension. The shell is spun over the top cap bearing and a spring applies the tension of bearings against ball screw. This Ball Joint is used universally in hundreds of applications where excessive pressures would not be applied against the top cap.

TYPE "EC" BALL JOINT

Ball socket is located in same unit as cross drilled hole, giving added wall thickness. Ball stud with short neck allows more than 250 lbs. force against this unit. Swivel construction is assembled with a grease resistant neoprene washer to cushion movement and maintain proper tension. A spring clip allows rapid adjustment over great length. Stocked for rod sizes ¼" and 5/16".

TYPE "B" BALL JOINT

This is an adjustable spring type Ball Joint with cap bearing slotted one way. The threaded top bearing is assembled to maintain light tension against the bottom bearing and spring. A cotter pin is used to maintain proper adjustment. This type Ball Joint is ideal for applications requiring take up of wear.

TYPE "F" BALL JOINT

Low cost, trouble free unit readily adapted to various rod or shell sizes. Non adjustable type permitting 15° movement in any direction. No retaining devices needed. The type "F" should be applied where the higher cost of adjustable Ball Joints makes it necessary to substitute clevises, trunions, bent rods or other less effective ways to transmit motion.

TYPE "C" BALL JOINT

The type "C" Ball Joint is a positive adjustable type. It has no spring tension. The shell is cross drilled five ways. The fine pitch thread top bearing is inserted and locked by a cotter pin to provide desired free movement. Construction and adjustment features of this Ball Joint make it an outstanding number in the TOUREK line.

NEW SLIP-ON BALL JOINT

For quick assembly in "hard-to-get-at places". Slight retraction of outer shell exposes socket for quick insertion or withdrawal of ball. There are four component parts. 1. Shell 2. Outer housing 3. Spring 4. Ball Screw. This design completely houses compression spring and retains ball screw in its machined socket. Cotter pins, clips, or other retaining devices are eliminated.

Tourek
BALL JOINTS
The Recognized "STANDARD"

MAIL THE COUPON TODAY!

World's largest manufacturer of "STANDARD" Ball Joints. Also makers of Pipe Plugs and quality Screw Machine Products. Range: up to 2⅝" diameter single and multiple spindle machines. Operations include: Threading • Tapping • Milling • Drilling • Grinding • Polishing • Plating • Heat Treating • Silver Soldering.

ESTAB. 1920

J. J. TOUREK MANUFACTURING COMPANY
1901 SOUTH KILBOURN AVENUE, CHICAGO 23, ILLINOIS

Gentlemen:

Please mail to me at once, complete information and prices on TOUREK "STANDARD" Ball Joints, Rods and Linkages.

Name ____________________

Company ____________________

Address ____________________

City ____________ Zone ______ State ______

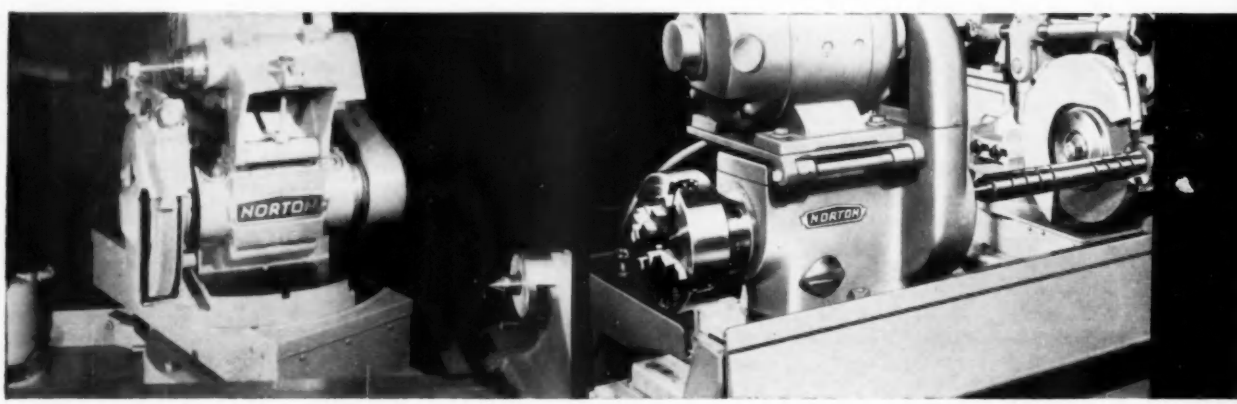
Circle 140 on Inquiry Card, for more Data

Circle 142 on Inquiry Card, for more Data

With fast change-over features like these...

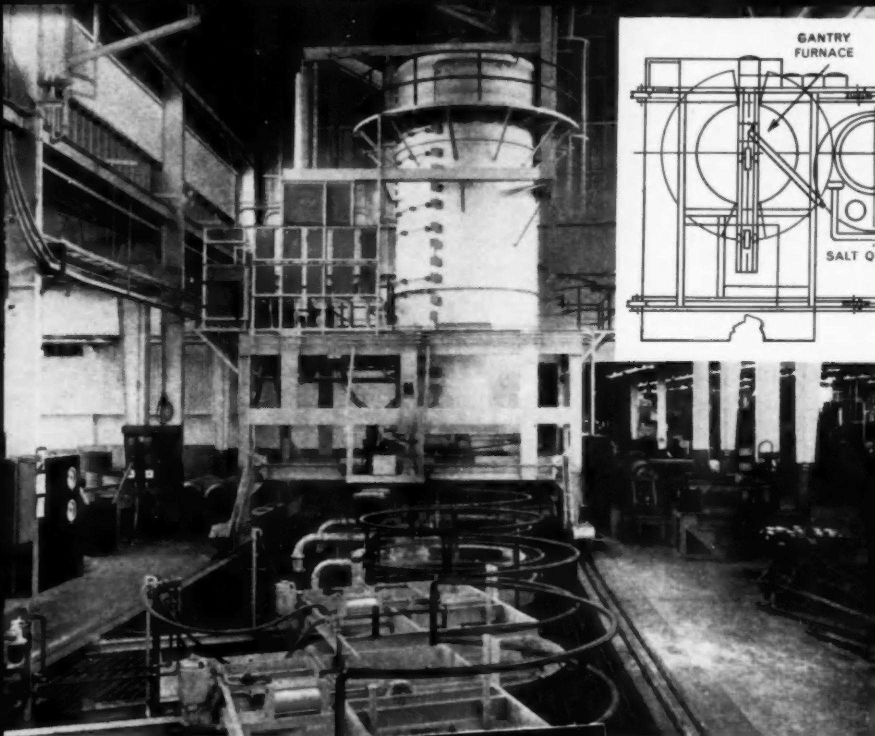
Norton Universal Grinders

do more...save more



The flexible grinding wheel head swivels above and below the slideways, permitting independent angular settings of wheel and feed — giving you the widest job range.

You can change from dead center to chucking work with minimum effort. Chuck remains mounted at back end of headstock when grinding "on centers".



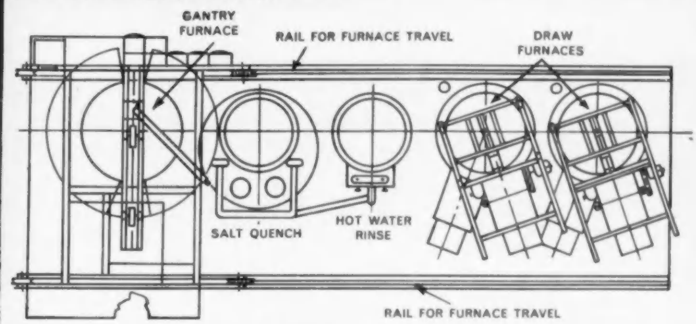
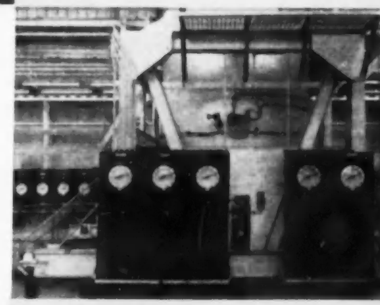


Diagram shows efficient grouping of all elements of the installation.

Furnace is more than 24 feet high. Chain shown at right lifts work into furnace.

Lindberg-Designed

The World's Largest Vertical Controlled-Atmosphere Drop Bottom Hardening Furnace



Lindberg control panels are conveniently located adjacent to the installation.

Pit has depth of more than 20 feet to accommodate large rocket cases.

This remarkable furnace combination was recently installed by Lindberg Industrial Corporation for a prominent missile manufacturer. It was designed by Lindberg engineers, in cooperation with the engineering staff of the manufacturer. The furnace is more than 24 feet high and is capable of heat treating rocket cases more than 5 feet in diameter and 20 feet long. The installation consists of the electric, controlled-atmosphere, Gantry type furnace and two draw furnaces, a hot water wash tank, a salt bath quench and a high nitrogen generator. The Gantry type furnace moves under power over the entire installation to load or unload at any of the pit stations. With this installation, production has been economized and speeded, and the metallurgical qualities of rocket cases improved.

Lindberg equipment and Lindberg planning can help you find the most effective answer to any problem of applying heat to industry. We cover the field, heat treating, melting and holding, tempering, brazing, enameling furnaces, ceramic kilns, high frequency units, and are in the ideal position to recommend just the type of equipment most suitable for your needs. This can be factory built or field-installed in your own plant, fuel-fired or electric. Consult your local Lindberg Field Representative (see the classified phone book) or get in touch with us direct. Lindberg Industrial Corporation, 2321 West Hubbard Street, Chicago 12, Illinois. Los Angeles Plant: 11937 South Regentview Avenue, at Downey, California.

LINDBERG heat for industry

Circle 144 on Inquiry Card, for more Data

The world's most popular

Power Brake is Hydrovac

because . . .

Vacuum power provides instant, effortless power braking *plus maximum dependability* and safety—even if power should ever fail, brakes can be applied manually.

Vacuum power saves dead weight. This can add several hundred extra pounds to every pay-load. And extra pounds mean extra profits.

Vacuum power does the job simpler and better with less maintenance and lower original cost!

Vacuum power steals no horsepower as it is completely free of compressor drain on engine power.

Unchallenged facts like these have made Hydrovac® Vacuum Power Braking first choice among truck operators—in fact, with over 5½ million sold, more Hydrovac units are in use than all other types.

HYDROVAC (VACUUM HYDRAULIC) POWER BRAKING BY BENDIX

Bendix PRODUCTS DIVISION South Bend, IND.

Bendix
AVIATION CORPORATION

AUTOMOTIVE INDUSTRIES

March 15, 1959 Volume 120, No. 6

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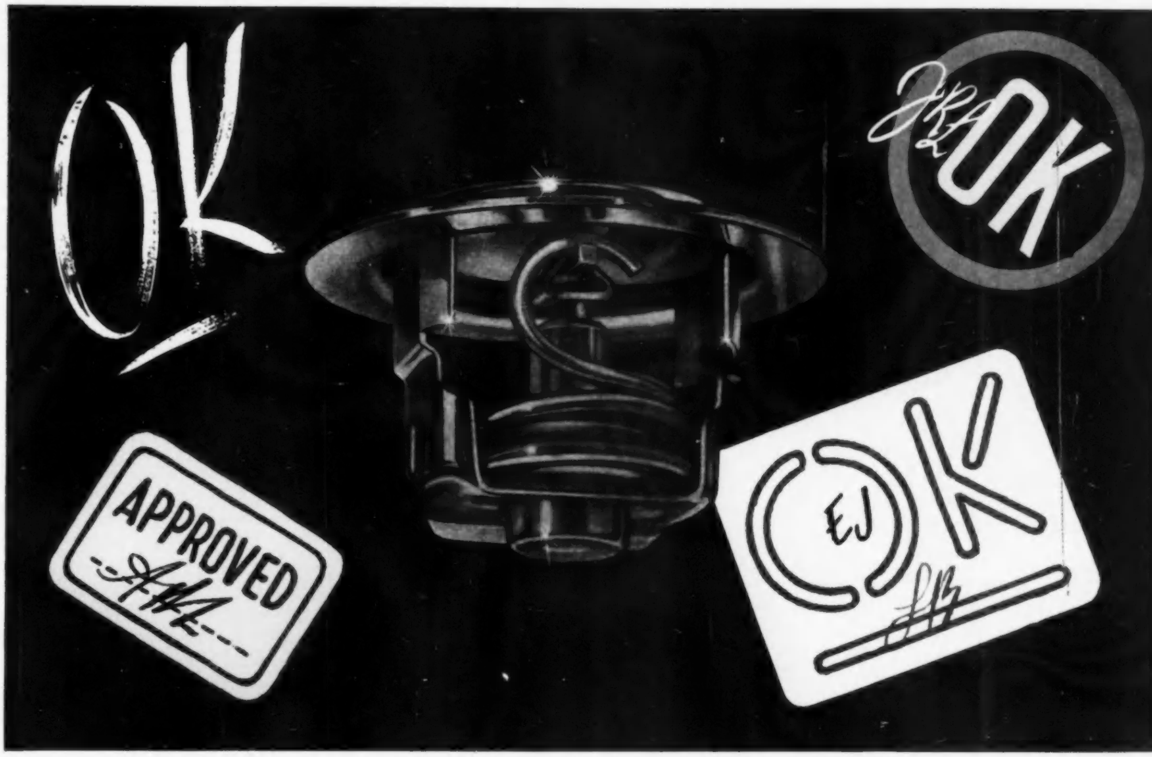

Men who know best put their O.K. on

DOLE THERMOSTATS

Year after year more and more automotive manufacturers choose Dole. Today, Dole Thermostats are standard equipment on 38 makes of passenger cars, trucks, tractors, commercial vehicles, industrial and marine engines. This includes 19 out of 20 top passenger cars*.

Dole has earned this position of leadership through their never-ending program of research and development and their constant adherence to the highest standards of quality in engineering and manufacturing. Dole Thermostats have passed every test for accuracy and dependability under all operating conditions.

So . . . it's no wonder that men who know best put their O.K. on Dole Thermostats. It's just good common sense.

*As listed in Automotive News.

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THE DOLE VALVE COMPANY 6201 OAKTON STREET, MORTON GROVE, ILLINOIS (Chicago Suburb)

News

OF THE AUTOMOTIVE AND AVIATION INDUSTRIES

Vol. 120, No. 6 **March 15, 1959**

Small Cars Growing Bigger Before They Hit The Market

The long-awaited and much-heralded U. S. small car is growing bigger before it even hits the streets. Two of the Big Three are planning larger versions of their new small cars for possible introduction in the fall of 1960.

Ford Motor Co. is continuing development of its 114-in. wheelbase Edsel 'B' to be sold by the MEL Div., and General Motors is working on a a 112-in. wheelbase BOP car to be sold by Buick, Oldsmobile and Pontiac.

Within recent years, segments of the buying public have revolted against increasing size of the American automobile. This is attested by sales gains of Rambler, Volkswagen, Renault and other shorter vehicles, including the more recent Studebaker Lark.

So the Big Three manufacturers are entering the small car field in the fall of this year with cars of 106 to 109 in. wheelbase (see AI March 1, 1959, and earlier stories). The companies feel they can corner enough of the already sizeable small car market to make the ventures pay off.

Slightly Larger Cars Planned

The Ford plan calls for introduction of the Edsel B in the fall of 1960. The car initially would use the same basic six-cylinder engine as the small Ford passenger car, but with larger displacement. In 1962, an aluminimum V-8 now being developed at Ford, probably would be installed in the Edsel B.

Ford is continuing its plans for a 119 in. wheelbase full-size Edsel for 1961 model year, but there is no apparent pressure on the project. The larger Edsel is being carried through just in case the entire small car concept should fall through. The larger Edsel definitely is in the picture for 1960 model year.

At GM, a single BOP car is being developed for all three of the medium price divisions. The cars would, of course, have styling distinction. A front-mounted aluminum V-8 engine is indicated for this car.

Ford and GM Undecided

There are two ways to approach the GM and Ford "not-quite-so-small" car programs. One is that the companies lack complete confidence in their more immediate short wheelbase products, and feel that something with a little more passenger room will be necessary to supplement the program. They want to be sure there is no size category left uncovered.

The other approach is that the small car is here to stay, and the medium price dealers should have a relatively small product of their own to share in this latest market trend.

Either way, the final decision on the Edsel B and the BOP small car will hinge on the success of the Ford, Chevrolet and even Plymouth compact entries.

Toyopet sedan is Japan's entry into U.S. economy car market

Japan Invades U. S. Market With New 6-Passenger Sedan

Japan's latest entry into the U. S. car market is a new six-passenger sedan built by Toyota Motor Co.

The Toyopet Crown Custom, which will sell for around $2300, was first introduced at the Chicago automobile show in January.

Designed with a minimum of overhang, The Toyopet's overall length is 172 in., overall height, 60 in. It is powered by a four-cylinder, 68-hp inline engine.

The Crown Custom is the first of a full line of vehicles which Toyota will distribute in the U. S. this year. Other models will include a six-passenger station wagon and the Toyota Land Cruiser, a four-wheel drive vehicle built like a jeep.

Toyota Motor Distributors, Inc., which will market the car in the U. S., disclosed that major spare parts depots will be established in Newark, N. J., and Evanston, Ill., in addition to one already in operation in Los Angeles, Calif.

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DELUXE LANCIA APPIA

New deluxe Lancia Appia, with restyled body, is powered by a four-cylinder engine that develops 38 bhp at 4800 rpm and has a 7.4 to 1 compression ratio. Transmission has four forward speeds and reverse.

AMC's Model Production Passes '58 Total Output

American Motors' 1959 model production passed the total 1958 output in the first six months of the year. Production of the '59 model began in late August last year, and before the end of February the total output was 162,740 units.

For the '58 model run, production totaled 162,182 cars.

The week ended Feb. 21 Rambler set a production record with 8489 units. In the sales category, Rambler continued its upward climb, with a 149 per cent increase so far in the fiscal year. Sales totaled 110,900, compared with 44,544 deliveries in the like period a year ago. In the second 10 days of February, retail sales totaled 8344 units, compared with 3029 a year ago.

Ford, Mercury and Edsel also reported sales gains in February. Ford said its sales in the second 10 days of the month were 54 per cent higher than last year, 7 per cent higher than the previous 10-day period, and 5 per cent higher than the corresponding January figure.

Ford sales for the first four months of the model year totaled 416,000, or 54,000 more than during the first four months of the 1958 model year.

Mercury sales in the mid-February period totaled 4322 units, a 21 per cent increase over a year ago, and for the first 20 days of February the 8043-car totaled represented a 26 per cent increase.

Edsel reported sales of 2813 cars during the first 20 days of the month, a 27.4 per cent increase over a year ago. Significantly, Edsel had its best day of the model year on Feb. 20, the day after a New York newspaper broke a story on the future of Edsel as an automobile.

General Motors Reports Lower Sales and Earnings During 1958

General Motors reports a 13 per cent drop in sales and a 25 per cent drop in net earnings for 1958, but GM officials looked optimistically toward 1959.

Net sales for the year totaled \$9,522 million, compared with \$10,990 million a year ago. Income totaled \$634 million, or 6.7 per cent of sales, compared with \$844 million, or 7.7 per cent of sales, in 1957.

GM board chairman Frederic G. Donner and president John F. Gordon said the high degree of product acceptance and the increased level of overseas operation helped sustain the profit margin. While units sales of cars and trucks produced in U. S. plants were down 22 per cent, overseas production was up 28 per cent in 1958.

GM's world-wide unit sales totaled 3,310,000 in 1958, compared with 3,885,000 cars and trucks the previous year. The 1958 total included 2,526,000 U. S.-built units and 186,000 Canadian cars and trucks.

Latest GM Experimental Car Features New Radar Scanner

The Cadillac Cyclone, latest General Motors experimental car, features a radar road-scanning device and sliding doors. The car is a cooperative project of several GM divisions, but styling marks the Cyclone as a Cadillac product.

The Cyclone is a two-passenger car with a steel body and a plastic bubble canopy that folds beneath the rear deck surface. The canopy lifts backward when the doors are opened.

The door moves outward three inches at the touch of a button, and the driver then slides the door back along the side of the car.

The radar sensing units are located in the twin nose cones. The device warns the driver with both a warning light and a variable pitch signal of an automobile or any other object in the path of the Cyclone.

The car is built on a 104-in. wheelbase and has an overall length of 196.9 in. A standard Cadillac 325-hp engine is used, along with rear-mounted Hydra-Matic "transaxle," destined for later use on production Cadillacs. Exhaust outlets are ahead of the front wheels.

Power brakes use an air servo instead of vacuum, with air supplied from the air suspension system. Front wheels and brakes are integral aluminum castings.

Cadillac Cyclone is GM's latest experimental car

UTILITY CAR

Small Abarth-Zagado utility car is a modified version of the Fiat 500. Car seats two adults in front and a small child in back. It is powered by a rear-mounted air-cooled engine that develops 16.5 bhp at 4000 rpm.

Cleveland Releases Details On Its Electric-Powered Van

Cleveland Vehicle Co. has released details on its electrically powered stand-up van (see A.I., Mar. 1, 1959, P. 16). The vehicle's specifications are as follows:

Payload and Load Space—3000 lb; Model LA, 175 cu. ft. capacity; 83 in. long, 75 in. wide, 48¾ in. high.

Controls—Steering, speed, forward and reverse, foot brake, hand brake.

Maximum Speed—25/30 mph, forward or reverse.

Tires—Standard 8 x 17.5 tubeless nylon.

Motor — Series wound, heavy-duty type manufactured especially for the C-V truck. Acceleration obtained by field control.

Frame & Body—Unitized tubular steel construction. Die-formed Fiberglas panels, roof and floor pans. Styrafoam added for strength and insulation. Translucent roof over driver's compartment.

Front Axle—Drop center I-beam heat-treated steel drop forging.

Rear Axle — Full-floating, hypoid type, lapped in gear. Pinion, ball and roller bearings. Hotchkiss-type final drive. Chrome-molybdenum-steel axle shafts. Differential and wheel bearings, tapered rollers. Electrolok power axle, nonslip differential.

Service Brakes—4-wheel, hydraulic, internal expanding, 2-shoe servo type.

Hand Brake—Propeller shaft type —truck cannot be started unless this brake is in off position.

Wheel Base—107 in.; wheel tread —front: 61 in.; rear: 63 in.

Steering—Ross; cam and twin lever type.

Controller—Cam type with reversing and safety locking switch. Safety feature prevents starting of truck when controller is left in any speed position.

Transfer Switch—Three positions: running, neutral, charging. Interlocks with operator's key, line contactor and emergency brake.

Main Line Contactor—Closes circuit between batteries and controller; opens and closes without arcing.

Charging Plug—Anderson, 2-wire, Type N; 150 amp.

Battery —Exide-Ironclad—size depends on mileage desired.

Standard Equipment — Dual head lights, tail lights, directional signals, dome light, dual horns, windshield wipers.

Optional Extras — LP gas heater with tank; Sangamo meter; defroster fan; discharge indicator; refrigerator equipment, 12 v battery.

Weights—Chassis and body 3000 lb
Battery (standard) 2200 lb
Licensing weight...3000 lb
Permissible GLW..8200 lb

International Unveils New 12-Passenger School Bus

A new light-duty schoolbus that seats 12 children or 10 adults has been announced by International Harvester Co.'s motor truck division.

The new bus has two longitudinal seats, a remote control door handle for the driver, automatic safety signal lights, and a lowered entrance step. Conventional two-wheel-drive or four-wheel-drive chassis are available. Gross vehicle weight is from 4200 lb to 7000 lb, depending on the chassis selected.

Optional features include automatic transmission, power steering, and power brakes. The bus is powered by the International valve-in-head Black Diamond engine.

Colbert Sees World Market For Passenger Cars Growing

A healthy growth in the world-wide automobile market, with yearly sales of six million passenger cars by 1965, is predicted by L. L. Colbert, Chrysler Corp. president.

Colbert says the rapid growth of new car markets outside the U. S., and simultaneous road building programs, could provide the United States an opportunity to cement loyalties of the underdeveloped countries.

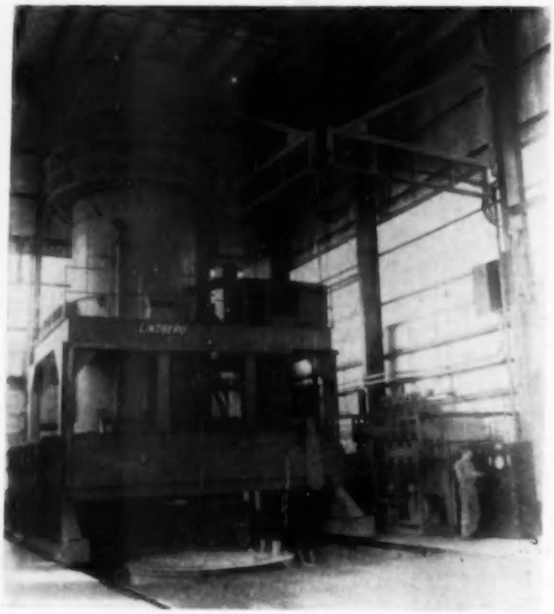
In a speech in Houston, Colbert suggested the possibility of increased aid in building roads as a substitute for some of the other expenditures in our foreign assistance program. He called this one of the "best possible ways of helping other peoples help themselves."

Colbert pointed out that outside the U. S., road-building expenditures in 1958 increased 20 per cent over the previous year as nations expanded their highway networks.

Colbert said that probably no later than 1970, the market for cars outside the United States will be consistently larger than our own.

International light-duty school bus can accommodate 12 children

News AUTOMOTIVE AND AVIATION



HARDENING FURNACE

Controlled atmosphere furnace built by Lindberg Engineering Co. is designed for hardening rocket motor cases and aircraft components. Furnace spans a pit containing an atmosphere quench chamber, a salt quench tank, rinse tank, and draw furnace. Heating elements provide 500 KW in five zones of control. Furnace is mounted on four wheels with rails, allowing travel along the 57-ft length of the pit. Controls include a pushbutton control station and five circular scale indicating pyrometer control panels.

Chrysler Designs Lightweight Aluminum Truck for Military

Chrysler has developed a lightweight aluminum truck that can ford fields or rivers with equal facility. The new vehicle was developed under a contract from the Detroit Ordnance District in cooperation with the Ordnance Tank Automotive Command.

The 2½ ton truck can float with a payload of 5000 lb because of its hull-type aluminum body.

Chrysler designed the 8-wheel drive vehicle to use existing production facilities for Chrysler's own 361-cu in. engines, transmissions, axles, drive lines and other components. The truck is one of a family of three vehicles which will use identical components for 4-wheel, 6-wheel, and 8-wheel drive units.

High component interchangeability further reduces the project cost to the Army.

Independently sprung wheels, which travel 9.5 in. vertically, and wide section low-pressure tires give the truck the versatility of a tank or track-laying carrier. The Chrysler truck has the added advantage of being able to operate at highway speeds.

Although specifications have not been released, the truck is listed as 5000 lb lighter than comparable military trucks. First demonstration of the vehicle is planned for April 1 for Army officials at Fort Bragg, N. C.

The body is of unitized construction with a hull shape that protects engine, axles and other operating components from weather and dirt.

Divco-Wayne Unveils New Bus For Schools, Small Cities

Divco Truck Div. of Divco-Wayne Corp. has introduced a new bus designed for school transportation or small city and charter operation. The bus is being built at the division's plant in Warren, Mich.

Built on wheelbases of 117, 130 and 154 in., the bus has seating capacities ranging from 16 children and 12 adults to 25 children and 20 adults. Divco sees a large market in the feeder, airport, charter and small city operations.

The bus combines features of both Divco and Wayne. It is powered by Divco's 253-in., 6-cylinder valve-in-head engine.

Divco - Wayne, incidentally, has been engaged in "preliminary" merger discussions with Studebaker-Packard Corp. Divco-Wayne is a highly profitable operation—stock has more than doubled within a year—and the merger would be beneficial to S-P.

The South Bend automobile maker has a $140 million tax loss credit against which Divco-Wayne profits could be charged after a merger.

Divco's new bus, called the Coachline, is available in two series. The Panoramic has a rounded, wide-window rear end with side emergency door. The Custom series has a straight-line rear end with rear emergency door. The widest model in either series is less than 87 in wide.

Goodyear Has Record Earnings As 1958 Sales Volume Declines

Goodyear Tire & Rubber recorded its highest earnings in history for 1958, although sales dropped 3.8 per cent. Income totaled $65.7 million for the year, compared with $64.8 the previous year. Sales amounted to $1367.5 million, a drop from the record-breaking total of $1421.8 million in 1957.

Board chairman E. J. Thomas said the sales drop was attributed partly to the decline in automotive production during 1958, but an increase is expected in 1959 as vehicle production improves.

Goodyear spent $53.3 million on plant expansion and improvement during the past year, a drop of some $29 million from the previous year. The 1958 capital expenditures covered programs in six U. S. cities and 10 foreign countries.

Truck Sales Boom Points to Rise in Car Sales, Cole Says

A substantial pickup in truck sales indicates a better than expected year for passenger car sales, according to Chevrolet general manager E. N. Cole.

Cole points out that the rise or fall of truck sales usually precedes fluctuations in the passenger car market by from three to six months. While passenger car sales are running ahead of last year, truck sales are even farther ahead.

As an example, Chevrolet passenger car sales in the first 20 days of February were 21.5 per cent ahead of 1958, but truck sales were 47.5 per cent ahead.

"We believe the 5.5 million estimate for the industry this year is conservative," states Cole.

Twin-Grip Differential Offered on All Ramblers

American Motors is offering Twin-Grip limited-slip differential on all Rambler Six and Rambler American models as an extra-cost option. The differential formerly was available only on the Rambler Rebel and Ambassador models.

Romney Sees Small Car Sales Hitting 3 Million by 1963

George Romney, president of American Motors, foresees an annual sales level of three million small cars a year by 1963.

Romney, in a letter to AMC stockholders, said his company is in an "excellent position" to capitalize on its experience and advantages as the market changes. And he strongly hinted at a cash dividend at the end of AMC's current fiscal quarter.

The company has not paid a cash dividend since June 1954. This came one month after formation of American Motors through the merger of Nash-Kelvinator Corp. and Hudson Motor Car Co. A M C paid a 5 per cent stock dividend last December.

Romney says entry of the Big Three into the compact car field will accelerate the opportunity for Rambler sales growth.

The AMC chief said in his letter that settlement of the Pittsburgh Plate Glass Co. strike would enable his company to achieve its production schedule of 100,000 vehicles in the current quarter.

FUEL TRUCK FEATURES COMPACT DESIGN

This compact fuel delivery truck is only 19.5 ft long and has a turning radius of 20.4 ft. This compares with a length of over 24 ft and a 30-ft turning radius for similar trucks. Designed and built for Standard Oil Co. (Indiana) by Farrell Mfg. Co., Joliet, Ill., the vehicle carries 1500 gallons of fuel.

M-F Aiming for 25 Per Cent Of U. S. Farm Tractor Market

Massey-Ferguson hopes to increase its share of the U. S. farm tractor market to 25 per cent within the next five years, almost doubling its Detroit tractor production. The Toronto-based company currently sells slightly less than 10 per cent of the market.

M-F has been concentrating on its North American expansion program, particularly in the States, during the past year. While worldwide sales went up 7 per cent during 1958, U. S. sales increased by 41 per cent. Canada finished with a strong fourth quarter after earlier drought months.

Ward W. Dworshak, general sales manager for the U. S., said in Detroit that the "outlook for the farm equipment business is tremendous—all companies are making big strides, and this is healthy for the whole industry." M-F held a worldwide sales convention in Detroit in February.

For the fiscal quarter just ended, M-F total sales were $86 million, an 8 per cent increase over last year. But for North America, sales of $35 million were 75 per cent above the 1958 pace. M-F says it does 17 per cent of its total year's business in the first quarter.

The company also has plans for broadening its coverage in the industrial equipment field through its recently-acquired Wichita Industrial Div. A wider distribution organization is being formed to handle a more complete line of industrial products, according to M-F.

A spokesman said M-F plans to push the Perkins Diesel engine line, recently taken over, as a separate industrial application engine.

ROCK 'N ROLL

This 1959 Oldsmobile is undergoing a severe shaking to test its resistance to road vibration. Equipment subjects every part of car to same stresses it gets in normal driving. Electronic instrument on table graphically reports the performance of all parts being tested.

New Firm to Assemble Chrysler And Simca Cars in South Africa

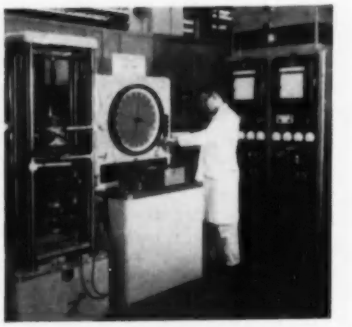
A new company, Chrysler South Africa (Pty) Limited of South Africa, will assemble Chrysler and Simca vehicles in Capetown for the South African market. The company is owned jointly by Chrysler International, S.A. and Atkinson-Oates, Chrysler distributor in South Africa.

Assembly will be in a 215,000 sq ft plant built by Atkinson-Oates in 1956. The plant has a daily capacity of 60 cars and 12 trucks. Chrysler and Simca parts also will be distributed through a 30,000 sq ft MoPar depot operated in Capetown by the new company.

With the South African operation, Chrysler cars now are assembled in 15 countries outside the U. S. and Canada.

GM's Proving Grounds Log 200 Million Test Miles

General Motors' four test grounds have recorded more than 200 million miles of automotive tests, equal to 422 round trips to the moon. The commercial proving ground at Milford, Mich., has logged more than 193 million miles of test runs.



HEAT TESTING

This quick-heat source developed by Boeing Airplane Co. is used together with a universal testing machine to run tensile tests of materials under the simulated temperature of high-speed flight. Power for the furnace comes through a pair of Ignitron units shown at right. Use of these electronic power regulators allows immediate control of heating and heat cycling (if desired).

Major Expansion Underway At Chrysler's Kokomo Plant

A major expansion program, slated for completion by mid-year, is underway at Chrysler Corp.'s Kokomo, Ind., plant. One source placed the cost of the program at $14 million.

Chrysler is expanding its aluminum foundry facilities at Kokomo, as well as installing new machine tools for finishing operations. The foundry eventually will produce new engine blocks and transmission bell housings, in addition to present output.

Chrysler will cast its 170-cu in. small car engine in Kokomo with a 1600 ton die. A prototype already has been completed. Chrysler's larger version six-cylinder aluminum engine (225-cu in.) will follow by the spring of 1960.

Oldsmobile Adjusts Toe-In With New Electronic Device

Oldsmobile is using a new electronic device to set toe-in alignment to within 0.03 in. The instrument was developed jointly by Oldsmobile engineers and the GM process development section.

Heart of the system is the "linear-differential-variable transformer" for each of the two front wheels. The transformer provides guidance for electronic transducers which measure toe-in and record necessary adjustment on dials.

Wheels are kept in motion during measurement by powered rollers. An operator pneumatically sets the rod linkage of each wheel to get the final toe-in adjustment.

AI TABLOID

Dynex, Inc., has developed a new high-pressure hydraulic system for construction equipment that it says gives four times more power with the same size package as conventional systems. The Dynex system also includes "split flow" pumps, each of which can handle simultaneously up to 10 different operations on a machine.

* * *

A Chicago design firm has developed a new combination scraper - bulldozer - tractor for the Army Corps of Engineers. The new unit, called BAT (ballastable all-purpose tractor), weighs 16,000 lb, and can be parachuted into areas for the construction of advanced air strips. BAT can be dropped as a single unit and be ready for operation 15 minutes after it hits the ground. It can also be divided into three sections for transportation by helicopter.

* * *

A non-woven felt made of synthetic fibers has been successfully field tested in a number of applications in the machinery and metalworking fields, according to Troy Blanket Mills, New York City. Advantages claimed for the new material, which is made of Dacron, Orlon and other fibers, are: high strength, dimensional stability and unusual resistance to abrasion, moisture, temperature extremes, and most acids and alkalis.

* * *

A new highly fluorinated synthetic elastomer designed for use at 400 F has been announced by the Chemical Div. of Minnesota Mining and Mfg. Co. The new elastomer has a low-compression set and chemically resists petroleum-based lubricants and hydraulic fluids, JP-type aromatic fuels, HEF or Hi Cal fuels, and powerful oxidants such as 90 per cent hydrogen peroxide, and red fuming nitric acid.

* * *

Coatings containing butadeine-acrylonitrile copolymer and phenolic resin will protect steel against gasoline and moisture, according to an Army research report issued by the Office of Technical Services. (Order PB 131738 from OTS, U. S. Dept. of Commerce, Washington 25, D. C., $1.00.)

Jones & Laughlin Steel Corp. is marketing a series of new carbon electrical steels under the trade name "Jalox." It is believed that the steels, made in J&L's new basic oxygen furnaces, will be the first of their kind made by this process to be marketed in the U. S.

* * *

Dayton Rubber Co. reports progress on two new automotive applications of urethane foam. One is a new air filter capsule of open cell structure that resists salt, humidity, gasoline, oil, and antifreeze; doesn't clog through corrosion; and has a labyrinth type of screening action. The other is a sound-and-heat barrier at the firewall, consisting of a sandwich structure in which the urethane is foamed between the firewall sheet metal and an embossed plastic skin inside the car.

* * *

A new high-temperature graphite that shows low wear and low friction at 1200 F has been developed by Stackpole Carbon Co., St. Marys, Pa. Known as Stackpole Graphite Grade 469, the material is self-lubricating, will not seize or fuse, and resists most chemicals and gases, Stackpole says.

* * *

Use of vinyl clad aluminum for interior paneling in buses cuts manufacturing costs and improves interior styling, according to Mack Trucks, Inc. The vinyl clad metal, manufactured by Clad Rex Corp., not only does away with the need for painting but is so abrasion-resistant that it can be run through shearing, forming, and even hammering operations without the use of protective coverings of any kind, Mack says.

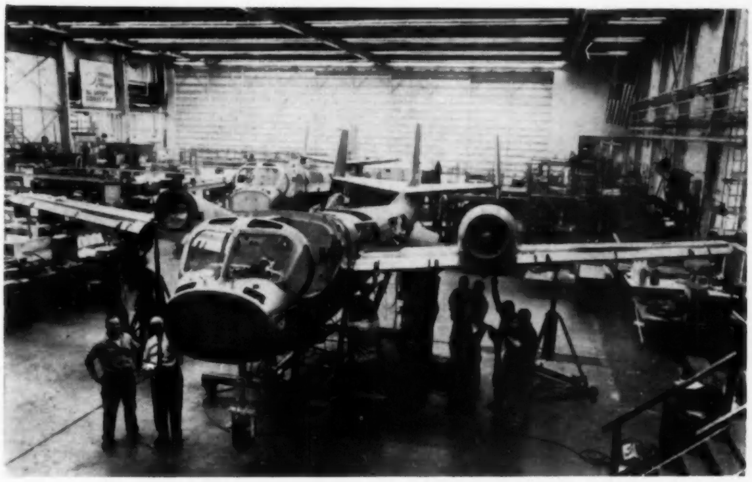
* * *

Carter Carburetor Div. of ACF Industries has licensed Almac of Sao Paulo, Brazil to make and sell Carter carburetors, fuel pumps, fuel filters and parts in Brazil.

* * *

University of Detroit has launched a basic program in gravitational research under an Army contract. Aim of the new project, according to university officials, "is to find, stimulate and produce experimental results which shall increase man's knowledge of gravity."

AVIATION MANUFACTURING



First airplane on Grumman Mohawk production line is nearly completed

Grumann Gets Army Award For 35 Mohawk Propjets

The Army awarded Grumman Aircraft Engineering Corp. a $22 million contract to produce 35 propjet Mohawk airplanes.

The Mohawk AO-1AF will be powered by two Lycoming T-53L3 engines mounted in the above-the-wing nacelles. Each engine is rated at 1005 eshp.

The Mohawk has a 59-knot stall speed and relatively the same short takeoff and landing (STOL) capabilities as the Army's lightweight single-engine airplanes.

The Mohawk is equipped with tricycle landing gear, has a wing span of 42 ft, overall length of 41 ft, and weighs 9000 lb (empty).

The Navy Bureau of Aeronautics, which is administering the contracts for the plane, is slated to test nine prototype models being built under a contract awarded Grumman in April 1958.

Lockheed to Build New C-130 With Boundary Layer Control

Lockheed's Georgia Div. is developing a new version of its C-130 troop-cargo carrier that will use both propjet and turbojet engines.

The development will take place under an Air Force contract awarded Lockheed to build a testbed C-130 designed to slash further the short takeoff and landing capabilities of the Hercules.

The contract, according to Carl Kotchian, Georgia Div. vice president and general manager, calls for inclusion of a boundary layer control system, which cuts the plane's stall speeds. The Hercules would be the largest airplane in this country to be so equipped, Kotchian said.

Two jet engines for boundary layer control will be hung in pods under the wings of the testbed C-130 in addition to the four propjet Allison T-56 engines now used to power the plane.

"The flow of high-energy air over the flaps and ailerons will increase the ability of the wing to lift at very low air speeds," Kotchian explained. "Because of this ability to reduce air speed for taking off and landing, the same system is applied to the rudder and elevators."

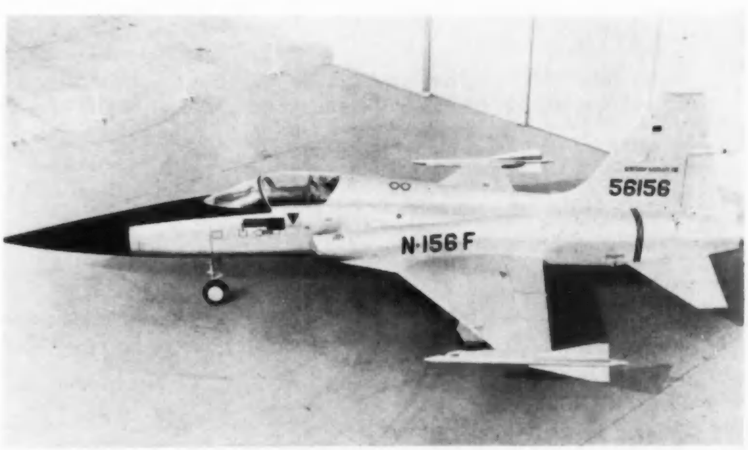
The C-130's boundary layer control system will be used only for takeoff and landings in forward combat zones and other areas with difficult terrain.

New Bendix Analyzer To Be Installed on Boeing 707

Bendix Aviation Corp. announced that its new turbine-engine analyzer will be installed on Boeing 707 aircraft operated by British Overseas Airways Corp.

The new device senses temperature and vibration condition at key areas on jet engines, Bendix said. On the Boeing 707, the instrument will be used to monitor ten temperature and two vibration stations on each of the plane's four Roll-Royce Conway jet engines. The British airline has ordered 20 analyzers.

The new analyzer was developed jointly by Bendix and B.O.A.C. and it will be produced by Bendix's Scintilla Div.



NORTHROP TO BUILD N-156F FIGHTER FOR U.S. ALLIES

This is a mockup of the new N-156F multi-purpose fighter which has been approved by U.S. Government for use by our allies. The N-156F, a twin-engined supersonic fighter now under development by Northrop Corp., is designed to operate from short relatively unprepared fields, can use a wide variety of advanced armament. Contract negotiations with the Air Force for the new plane will begin shortly.

CASE HISTORIES

Photo: Courtesy Perfect Circle Corp.

N/D Bearing Solved Response Problem In New Automotive Speed Control Device!

CUSTOMER PROBLEM:

Extensive testing revealed sluggish response of automobile speed control device.

SOLUTION:

N/D Sales Engineer, in cooperation with manufacturer, recommended replacing existing pure thrust bearing and bushings with New Departure double-shielded ball bearings. These light-duty, non-loading groove bearings, with uninterrupted ball raceways, withstand radial and thrust loads in any combination. This change resulted in virtually friction-free operation of the speed control device, correcting the response problem. What's more, these New Departures eliminated a lubrication problem and simplified assembly and maintenance.

Perhaps there's a New Departure automotive production ball bearing that will help solve a problem in your product . . . or produce an over-all cost savings. For more information, write Department C-3.

Replacement ball bearings available through United Motors System and its Independent Bearing Distributors

NEW DEPARTURE

DIVISION OF GENERAL MOTORS, BRISTOL, CONN.

NOTHING ROLLS LIKE A BALL

Circle 148 on Inquiry Card, for more Data

MEN
IN THE NEWS

General Electric Co., Metallurgical Products Dept.—Charles E. Reed has been named general manager to succeed Kenneth R. Beardslee, who remains as a consultant.

Martin Co. —**George D. Sands** has been made director of scientific requirements.

Mather Spring Co. — **William V. Luneburg** has been elected a vice-president.

World Bestos Div., Firestone Tire & Rubber Co.—**David O. Etchison** has been appointed to head sales promotional activities for the Replacement Sales Div.

Warner Electric Brake & Clutch Co. — **Reginald Whitson** has been named manager of Government projects.

Elwell-Parker Electric Co.—**Joseph A. Ackermann** has been named sales manager, and **John A. Draxler** has been made chief engineer.

American Chain & Cable Co., Page Steel & Wire Div.—**T. P. Bronco** has been appointed assistant to the general manager for sales activities, while **C. Laurence Warwick, Jr.**, has been named assistant to the general manager for production activities.

S. K. Wellman Co.—**E. J. Hrdlika** is now vice-president in charge of plant operation.

Vickers, Inc., Mobile Hydraulics Div.—Fred V. Gieryn is now general sales manager.

Chrysler Corp., Engine Div.—Harry R. Bentley and Vincent P. Masi were named managers of the Mound Road and Trenton engine plants, respectively.

Denison Engineering Div., American Brake Shoe Co.—**Robert A. Manogue** has been promoted to product manager, Pumps & Controls Div.

General Electric Co., Metallurgical Products Dept.—**H. J. Siekmann** is now manager of market development and research.

Reynolds Metals Co.—**William G. Reynolds** and **Joseph H. McConnell** have been elected executive vice-presidents.

Minneapolis-Moline Co.—**M. E. Carroll** was elected vice-president of marketing. **Roger R. Hipwell** was named sales manager of the Industrial and OEM Div., and **W. L. Pringle** was made sales manager of the Farm Machinery Div.

Crucible Steel Co. of America, Tool Steel Div. —**Dwight W. Kaufmann** has been appointed sales manager.

Ford Motor Co. of Canada, Ltd.—**John D. King** has been named vice-president and general manager of the Sales & Advertising Div.; **George H. Jackson**, vice-president and chairman of the dealer policy board; and **Kenneth Hallsworth**, director of industrial relations.

Clearing Machine Corp., Aircraft and Missile Div.—Kingsley C. Drone has been appointed chief engineer.

Garlock Packing Co.—Robert M. Waples was elected chairman of the board, and A. J. McMullen was named president and chief executive and administrative officer.

Roll Formed Products Co.—**Louis C. Colleran** has been named vice-president in charge of sales.

Chrysler Corp.—**William M. O'Brien** has been named director of industrial relations.

Doehler-Jarvis Div., National Lead Co.—**John W. Thees** was named production manager; **Charles I. Hodgson**, manager of Toledo, O., Plant I; and **Richard M. Hindman**, sales manager of the division's two Toledo plants.

Carpenter Steel Co., Mill Product Div.—**Avard W. Taylor** is now general sales manager.

Thompson Ramo Woodridge, Inc.—**Pierce T. Angell**, **Robert E. Cummings**, **William M. Jones**, and **Carl L. Kahlert** were elected vice-presidents.

Hoskins Mfg. Co. — **Norman F. Spooner** was promoted to manager of research and development.

Martin Co., Nuclear Div.—**Clare P. Stanford** was made chief of the Engineering Dept.

Wisconsin Motor Corp. — **George Whitney** has been appointed assistant purchasing agent.

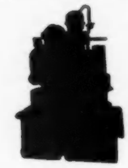
Youngstown Sheet & Tube Co. — **Clarence E. Short** is now Minneapolis district sales manager, and **Albert S. Harris** has become assistant manager, oil country tubular sales, at the home office.

(Turn to page 367, please)

FELLOWS GEAR

CUTTING

GEAR
external and internal

	3" FINE-PITCH	NO. 4GS	7-TYPE	7A-TYPE
Max. Pitch Diameter	3" ext., 2" int.	6"	7" spur*, 6-1/2" hel.	7"
Max. Diametral Pitch	40 steel, 30 brass	5/7 spur, 6 hel.	6 spur, 6/8 hel.	5/7 spur, 6 hel.
Max. Face Width	3/4"	2"	1-1/2" ext., 1" int.	2" ext., 1-1/2" int.
Max. Strokes Per Min.	2000	635	450	450

*Max. P.D. internal—5-1/2"

FINISHING

SHAVING MACHINES
spur and helical gears

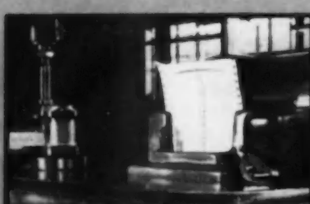
GEAR GRINDER

	NO. 4 FINE-PITCH	NO. 8 "FULL-TOOL"	NO. 11 INTERNAL
External & Internal	ext. only	yes	int. only
Max. Pitch Diameter	4"	8"	***
Max. Diametral Pitch	20	4	6
Max. Face Width	1"	2-1/2"	1-1/2" up to 10P; 1" 12 to 16P
Max. Spread of Centers	12"	**	***

NO. 12 FELLOWS REISHAUER (Gear Grinder): Spur and helical, max. O.D. 12". Max. face width, spur, 6-3/4"; helical: depends on pitch and helix angle. Pressure angles: 14-1/2° to 30°. Pitch ranges: 6 to 48 D.P. or 20 to 120 D.P.

Also 12", 18" and 24" machines for externals only. **Depends upon work-holding fixture. ***Depends upon design of gear.

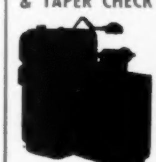


INSPECTION

COMPOSITE CHECK
external and internal spur and helical gears.

INVOLUTE PROFILE CHECK

LEAD, CROWN & TAPER CHECK

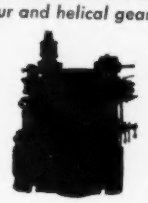
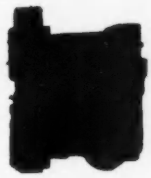
    

	No. 4 Fine-Pitch RED LINER	No. 8M RED LINER	No. 20M RED LINER	No. 12M Involute Measuring	No. 12H Lead Measuring
Max. Pitch Diameter	4"	***	18"	12"	12"

Nos. 24M Involute and 24H Lead Measuring Instruments available with capacity of 24 inches. ***Depends upon design of gear

PRODUCTION EQUIPMENT

SHAPERS
spur and helical gears

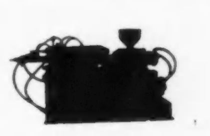
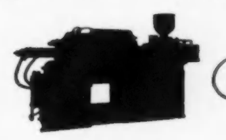
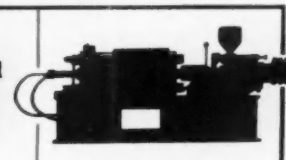
 6A-TYPE	 No. 12	 36-TYPE	 120-INCH
18″	12″	36″	120″
3/4 spur, 5/7 hel.	3/4 spur, 5/7 hel.	3 spur, 4/5 hel.	2 spur, 4 hel.
5″ ext., 3″ int.	4″	6″	8″
300	550	300	148

PFAUTER GEAR HOBBERS

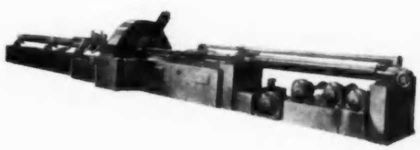
Now Fellows sells, and later will manufacture, the world-famous Pfauter Gear Hobbing Machines. Capacities from 3″ max. P.D., 2-3/4″ max. face width, to 120″ max. P.D., 1-1/4 D.P. and 30″ max. face width.

Also available: No. 10 Rotary Gear Shaper—10-spindle machine for very high production rates. Max. P.D. 12″. Max. D.P. 3/4 spur, 5/7 helical. Max. face width 3″. Max. cutting speed 500 strokes per minute.

FELLOWS injection molding equipment

Fellows Plastics Injection Molding Presses are the fastest fully-automatic machines in their capacity ranges. Sensitive, accurate, built-in controls assure fast, reject-free production with minimum operator attention.	 Model 3-125	 Model 6-200	 Model 12-350
Capacity	3 to 4-1/2 oz.	6 to 9 oz.	12 to 20 oz.
Pounds per hour	45	75	150
Cycles per hr. (dry run)	600 to 840	490 to 650	600 to 800
Max. mold size	12″ x 17″	15″ x 21″	20″ x 33″

No. 4 FELLOWS-APPEL COLD-FORMING MACHINE



Cold-works metal, ferrous or non-ferrous, to desired shape by kneading or plasticizing at room temperature. External shape is tubular, internal shape is determined by a mandrel. Maximum diameter of finished work: up to 4″ O.D., depending on wall thickness. Maximum length of finished work: 20′.

Fellows also builds special-purpose machines for production of gears and other related items. Descriptive literature, technical data and price information on all types of equipment shown is available on request. Contact any Fellows office.

THE FELLOWS GEAR SHAPER COMPANY
78 River Street, Springfield, Vermont
Branch Offices: 1048 North Woodward Ave., Royal Oak, Mich.
150 West Pleasant Ave., Maywood, N. J.
5835 West North Avenue, Chicago 39
6214 West Manchester Ave., Los Angeles 45

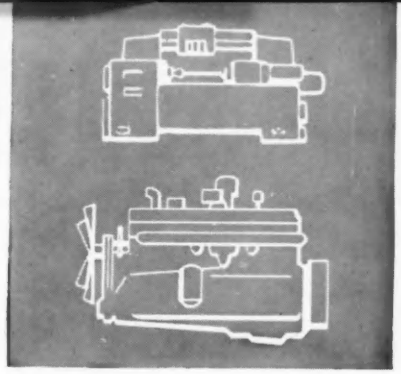
THE PRECISION LINE **Fellows** *Gear Production Equipment*

Circle 149 on Inquiry Card, for more Data

 Circle 153 on Inquiry Card, for more Data

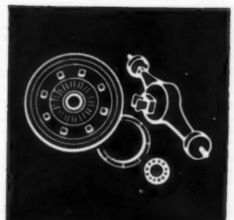
1

MOTOR VEHICLE SECTION



AUTOMOTIVE INDUSTRIES STATISTICAL ISSUE

FORTY-FIRST ANNUAL



CARS
TRUCKS
BUSES
TRAILERS
TRACTORS

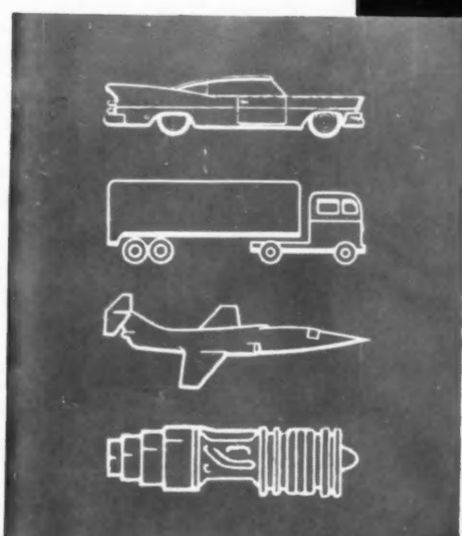
PRODUCTION

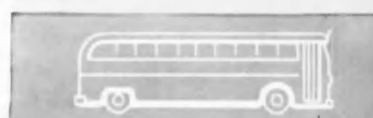
NEW REGISTRATIONS

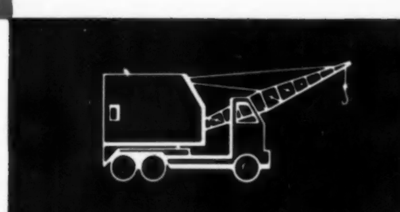
TOTAL REGISTRATIONS

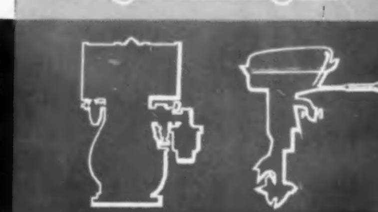
EXPORTS

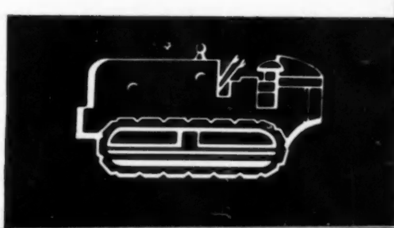
SPECIFICATIONS












...Results of a Superior Beginning
The countless parts and products made from Roebling high-carbon steel spring wire and flat spring steel have one thing in common... their superior quality. This, of course, is related to the inherent fineness of the materials.
The variety in which Roebling offers these spring materials is equally impressive. They are available in hard drawn, hard rolled, annealed or soft, tempered or untempered. Types include zigzag and no-sag wires; upholstery and mechanical spring wires; valve spring wire; clock- and motor-type spring steels and flat spring steels of all types and description.
Whatever the type, size or characteristics you require—Roebling can fit your needs exactly. You'll find that Roebling quality means maximum production from your machines and consistent uniformity in your product.
For spring wire and flat spring steel information, contact Wire and Cold Rolled Steel Products Division, John A. Roebling's Sons Corporation, Trenton 2, New Jersey.
ROEBLING
Branch Offices in Principal Cities—Subsidiary of The Colorado Fuel and Iron Corporation
CF&I
Roebling... Your Product is Better for it
Circle 155 on Inquiry Card, for more Data

Annual Motor Vehicle Factory Sales, 1900-1958

In Units and Their Wholesale Value, U. S. Plants

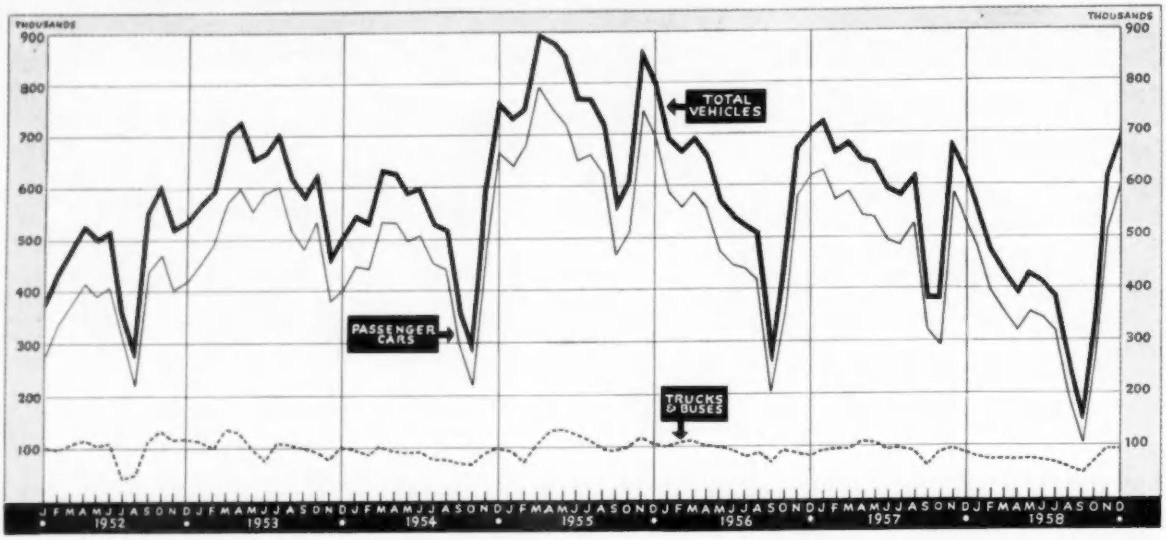
As reported by the Automobile Manufacturers Association

	PASSENGER CARS			TRUCKS AND BUSES			TOTAL	
Year	Number of Units	Wholesale Value†	Average Wholesale Price	Number of Units	Wholesale Value†	Average Wholesale Price	Number of Units	Wholesale Value†
1900	4,192	$ 4,899,443	$1,169	......	......	....	4,192	$ 4,899,443
1901	7,000	8,183,000	1,169	......	......	....	7,000	8,183,000
1902	9,000	10,395,000	1,155	......	......	....	9,000	10,395,000
1903	11,235	13,000,000	1,157	......	......	....	11,235	13,000,000
1904	22,130	23,357,692	1,055	700	$ 1,272,747	$1,818	22,830	24,630,439
1905	24,250	38,670,000	1,594	750	1,330,000	1,773	25,000	40,000,000
1906	33,200	61,460,000	1,851	800	1,440,000	1,800	34,000	62,900,000
1907	43,000	91,620,000	2,131	1,000	1,780,000	1,780	44,000	93,400,000
1908	63,500	135,250,000	2,129	1,500	2,550,000	1,700	65,000	137,800,000
1909	123,990	159,765,721	1,288	3,297	5,333,683	1,618	127,287	165,099,404
1910	181,000	215,340,000	1,189	6,000	9,660,000	1,610	187,000	225,000,000
1911	199,319	225,000,000	1,128	10,681	21,000,000	1,966	210,000	246,000,000
1912	356,000	335,000,000	941	22,000	43,000,000	1,954	378,000	378,000,000
1913	461,500	399,902,000	866	23,500	44,000,000	1,872	485,000	443,902,000
1914	548,139	420,838,378	768	24,900	44,219,096	1,776	573,039	465,057,474
1915	895,930	575,978,000	643	74,000	125,800,000	1,700	969,930	701,778,000
1916	1,525,578	921,378,000	604	92,130	161,000,000	1,747	1,617,708	1,082,378,000
1917	1,745,792	1,053,505,781	603	128,157	220,982,668	1,724	1,873,949	1,274,488,449
1918	943,436	801,937,925	850	227,250	434,168,992	1,910	1,170,686	1,236,106,917
1919	1,651,625	1,365,395,415	827	224,731	371,422,820	1,653	1,876,356	1,736,818,235
1920	1,905,560	1,809,170,963	949	321,789	423,249,410	1,315	2,227,349	2,232,420,373
1921	1,468,067	1,038,191,037	707	148,052	166,070,810	1,122	1,616,119	1,204,261,847
1922	2,274,185	1,494,513,991	657	269,991	226,049,658	837	2,544,176	1,720,563,649
1923	3,624,717	2,196,272,116	606	409,295	308,537,929	754	4,034,012	2,504,810,045
1924	3,185,881	1,970,096,559	618	416,659	318,580,580	765	3,602,540	2,288,677,139
1925	3,735,171	2,458,370,026	658	530,659	458,400,277	864	4,265,830	2,916,770,303
1926	3,783,987	2,640,064,519	598	516,947	452,123,435	875	4,300,934	3,092,187,954
1927	2,936,533	2,164,670,891	737	464,793	420,130,624	904	3,401,326	2,584,801,515
1928	3,775,417	2,572,599,143	681	583,342	460,108,903	789	4,358,759	3,032,708,046
1929	4,455,178	2,790,614,309	626	881,909	622,533,897	706	5,337,087	3,413,148,206
1930	2,787,456	1,644,083,152	590	575,364	390,752,061	679	3,362,820	2,034,835,213
1931	1,948,164	1,108,246,698	567	432,262	265,444,618	614	2,380,426	1,373,691,316
1932	1,103,557	616,860,347	559	228,303	137,624,157	603	1,331,860	754,484,504
1933	1,560,599	773,424,963	496	329,218	175,380,863	533	1,889,817	948,805,826
1934	2,160,865	1,140,478,174	526	576,205	326,781,688	567	2,737,070	1,467,259,862
1935	3,273,874	1,707,836,325	522	697,367	380,997,330	546	3,971,241	2,088,833,655
1936	3,679,242	2,014,747,225	548	782,220	463,719,466	593	4,461,462	2,478,466,691
1937	3,929,203	2,240,912,620	570	891,016	537,314,633	603	4,820,219	2,778,227,253
1938	2,019,566	1,241,032,295	615	488,841	329,917,646	675	2,508,407	1,570,949,941
1939	2,888,512	1,770,231,597	613	700,377	489,786,701	699	3,588,889	2,260,018,298
1940	3,717,385	2,370,654,083	638	754,901	567,820,414	752	4,472,286	2,938,474,497
1941	3,779,682	2,567,205,996	679	1,060,820	1,069,799,855	1,008	4,840,502	3,637,005,851
1942	222,862	163,813,559	736	818,662	1,427,456,801	1,744	1,041,524	1,591,270,360
1943	139	101,799	....	699,689	1,451,794,475	2,076	699,828	1,451,896,274
1944	610	446,704	....	737,524	1,700,928,939	2,306	738,134	1,701,375,643
1945	69,532	57,254,655	823	655,683	1,181,955,532	1,803	725,215	1,239,210,187
1946	2,148,699	1,979,781,084	921	940,866	1,043,247,276	1,109	3,089,565	3,023,028,360
1947	3,558,178	3,936,017,000	1,106	1,239,443	1,731,713,000	1,397	4,797,621	5,667,730,000
1948	3,909,270	4,870,423,000	1,246	1,376,274	1,880,475,000	1,366	5,285,544	6,750,898,000
1949	5,119,466	6,650,857,000	1,299	1,134,185	1,394,035,000	1,229	6,253,651	8,044,892,000
1950	6,665,863	8,468,137,000	1,270	1,337,193	1,707,748,000	1,277	8,003,056	10,175,885,000
1951	5,338,435	7,241,275,000	1,356	1,426,828	2,323,859,000	1,629	6,765,263	9,565,134,000
1952	4,320,794	6,455,114,000	1,494	1,218,165	2,319,789,000	1,904	5,538,959	8,774,903,000
1953	6,116,948	9,002,580,000	1,472	1,206,266	2,089,060,000	1,732	7,323,214	11,091,640,000
1954	5,558,897	8,218,094,000	1,478	1,042,174	1,660,019,000	1,593	6,601,071	9,878,113,000
1955	7,920,186	12,452,871,000	1,572	1,249,090	2,020,973,000	1,618	9,169,276	14,473,844,000
1956	5,816,109	9,754,971,000	1,677	1,104,481	2,077,432,000	1,881	6,920,590	11,832,403,000
1957	6,113,344	11,198,379,000	1,832	1,107,176	2,082,723,000	1,881	7,220,520	13,281,102,000
1958	4,257,812	8,010,000,000	1,881	877,294	1,719,000,000	1,959	5,135,106	9,729,010,000

*—Partly estimated. †—Beginning with year 1937, standard equipment is included in the values reported.

A substantial part of trucks and buses reported comprises chassis only, without bodies; hence the value of bodies for these chassis is not included. Federal excise taxes are excluded in all years. Table above includes sales of military vehicles.

MONTHLY MOTOR VEHICLE FACTORY SALES FROM U. S. PLANTS



1958 U. S. Passenger Car Production, by Makes, by Months

As reported by the Automobile Manufacturers Association

Make of Car	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
Rambler	16,311	14,872	10,000	14,349	18,999	18,281	18,038	3,062	19,141	26,124	26,571	31,584	217,332
Total—American Motors	**16,311**	**14,872**	**10,000**	**14,349**	**18,999**	**18,281**	**18,038**	**3,062**	**19,141**	**26,124**	**26,571**	**31,584**	**217,332**
Chrysler	6,283	4,181	4,908	4,630	5,615	4,630	5,300	0	1,291	3,860	4,833	3,973	49,504
De Soto	3,669	3,528	3,790	2,597	2,415	3,997	3,063	76	2,644	3,696	4,497	2,728	36,700
Dodge	9,597	6,607	9,846	9,581	9,298	11,462	10,250	2,061	8,904	15,753	14,233	7,073	114,665
Imperial	1,869	1,158	1,610	1,275	990	716	712	0	412	1,300	1,609	2,022	13,673
Plymouth	38,588	26,964	35,300	33,779	32,125	35,486	34,796	19,026	15,444	32,525	37,774	24,951	366,758
Total—Chrysler Corp.	**60,006**	**42,438**	**55,454**	**51,862**	**50,443**	**56,291**	**54,121**	**21,163**	**28,695**	**57,134**	**62,946**	**40,747**	**581,300**
Edsel	1,733	1,103	1,224	1,216	1,172	496	596	963	101	4,673	5,473	7,813	26,563
Ford	118,261	95,701	75,006	69,314	75,650	71,043	72,878	71,021	13,856	102,121	133,583	140,126	1,038,560
Lincoln	3,217	3,435	2,998	1,949	1,825	1,409	1,185	1,174	522	1,775	2,772	3,610	25,871
Mercury	12,415	11,310	11,278	7,752	12,356	9,151	7,899	12,788	0	4,393	16,982	22,104	128,428
Total—Ford Motor Co.	**135,626**	**111,549**	**90,506**	**80,231**	**91,003**	**82,099**	**82,558**	**85,946**	**14,479**	**112,962**	**158,810**	**173,653**	**1,219,422**
Buick	36,463	24,735	20,389	17,763	17,578	16,183	0	7,257	21,583	13,379	38,007	43,787	257,124
Cadillac	13,459	12,807	12,786	13,518	12,875	11,606	11,825	634	3,205	1,151	14,368	17,267	125,501
Chevrolet	151,818	124,923	117,127	93,616	113,639	111,371	111,188	61,872	20,861	24,984	136,138	188,406	1,255,943
Oldsmobile	40,652	34,417	27,862	26,552	26,074	23,829	23,292	498	14,132	10,687	37,183	45,617	310,795
Pontiac	32,474	23,909	18,842	15,333	15,630	13,997	16,490	35	7,834	6,572	29,851	38,856	219,823
Total—General Motors Corp.	**274,866**	**220,791**	**197,006**	**166,782**	**185,796**	**176,986**	**162,795**	**70,296**	**67,615**	**56,773**	**255,547**	**333,933**	**2,169,186**
Packard	428	376	323	170	102	147	199	0	0	0	0	0	1,745
Studebaker	2,367	2,258	3,768	3,203	3,275	3,643	3,325	117	335	8,698	10,280	13,855	55,124
Total—Stude.-Pack. Corp.	**2,795**	**2,634**	**4,091**	**3,373**	**3,377**	**3,790**	**3,524**	**117**	**335**	**8,698**	**10,280**	**13,855**	**56,869**
Checker Cab	237	360	386	408	328	209	192	0	21	254	381	491	3,267
Total—Passenger Cars	**489,841**	**392,644**	**357,443**	**317,005**	**349,946**	**337,656**	**321,228**	**180,584**	**130,286**	**261,945**	**514,535**	**594,263**	**4,247,376**

1958 U. S. Truck and Bus Production, by Makes, by Months

As reported by the Automobile Manufacturers Association

Make	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
Chevrolet	25,587	23,244	26,240	25,711	24,558	23,899	22,770	11,463	13,325	10,044	33,472	38,319	278,632
G.M.C.	5,805	5,280	5,445	5,419	5,188	4,733	4,708	4,108	3,405	3,232	7,292	7,135	61,768
Diamond T	479	473	447	464	436	511	336	388	570	652	524	701	5,981
Divco	264	240	252	264	252	180	156	216	290	308	252	245	2,919
Dodge and Fargo	4,615	4,474	4,280	5,287	5,971	5,712	5,893	2,356	2,137	4,819	6,036	7,091	58,671
Ford	23,396	18,942	17,585	18,078	20,356	17,548	15,612	16,967	7,266	29,649	30,891	26,599	242,890
F.W.D.	132	110	136	128	112	103	74	67	106	114	70	75	1,227
International	11,763	9,570	6,673	7,884	6,818	6,160	6,182	6,069	7,860	7,297	3,964	973	81,213
Mack	1,218	1,312	1,309	1,377	1,187	1,212	1,230	1,205	1,052	830	1,075	1,299	14,306
Studebaker	754	1,027	1,077	1,066	858	902	439	372	453	1,079	974	1,562	10,563
White	1,741	1,534	1,493	1,520	1,382	1,223	954	1,123	1,365	1,914	1,440	1,714	17,403
Willys	6,429	6,901	7,092	7,060	6,819	6,836	8,432	5,079	9,385	9,844	8,960	9,262	92,099
Other Trucks	267	264	255	265	272	259	265	226	244	276	239	297	3,129
Total—Trucks	**82,450**	**73,371**	**72,284**	**74,524**	**74,209**	**69,278**	**67,051**	**49,639**	**47,458**	**70,058**	**95,189**	**95,290**	**870,801**
Buses	356	277	332	334	228	107	376	300	217	139	175	198	3,039
Total—Trucks and Buses	**82,806**	**73,648**	**72,616**	**74,858**	**74,437**	**69,385**	**67,427**	**49,939**	**47,675**	**70,197**	**95,364**	**95,488**	**873,840**
Total—Passenger Cars	**489,841**	**392,644**	**357,443**	**317,005**	**349,946**	**337,656**	**321,228**	**180,584**	**130,286**	**261,945**	**514,535**	**594,263**	**4,247,376**
Total—Motor Vehicles	**572,647**	**466,292**	**430,059**	**391,863**	**424,383**	**407,041**	**388,655**	**230,523**	**117,961**	**332,142**	**609,899**	**689,751**	**5,121,216**

U. S. Motor Vehicle Factory Sales, by Months, by Years

As reported by the Automobile Manufacturers Association

Month	Passenger Cars 1958	Passenger Cars 1957	Passenger Cars 1956	Trucks and Buses 1958	Trucks and Buses 1957	Trucks and Buses 1956	Total Motor Vehicles 1958	Total Motor Vehicles 1957	Total Motor Vehicles 1956
January	478,416	628,045	591,032	80,117	92,386	99,221	558,533	720,431	690,253
February	396,221	570,023	560,924	71,332	92,805	102,662	467,553	662,828	663,586
March	359,464	585,734	583,169	74,000	92,994	106,813	433,464	678,728	689,982
April	322,482	541,733	552,881	74,230	106,781	101,452	396,712	648,514	654,333
May	352,076	537,112	474,010	75,532	104,324	96,476	427,608	641,436	570,486
June	342,228	496,329	445,758	70,743	95,210	92,294	412,971	591,539	538,052
July	316,408	484,718	440,980	65,405	97,294	81,038	381,813	582,012	522,018
August	194,974	521,282	417,020	55,486	90,467	86,256	250,460	611,749	503,276
September	102,687	318,279	203,888	46,569	63,374	71,667	149,256	381,653	275,555
October	272,241	291,064	352,140	70,083	89,112	92,982	342,324	380,176	445,122
November	511,885	583,783	576,708	93,449	94,815	90,479	605,334	678,598	667,187
December	608,730	555,242	617,599	100,348	87,614	83,141	709,078	642,856	700,740
Total	**4,257,812**	**6,113,344**	**5,816,109**	**877,294**	**1,107,176**	**1,104,481**	**5,135,106**	**7,220,520**	**6,920,599**

Passenger Car, Truck, and Bus Production, by Makes. 1954-1958

As reported by the Automobile Manufacturers Association

Make of Car	1958 Units	1958 % of Total	1957 Units	1957 % of Total	1956 Units	1956 % of Total	1955 Units	1955 % of Total	1954 Units	1954 % of Total
PASSENGER CARS										
Hudson	......	.....	1,345	.02	7,182	.12	26,623	.33	28,032	.51
Nash	......	.....	3,561	.06	17,841	.31	51,315	.65	29,371	.53
Rambler	217,332	5.12	109,178	1.78	79,162	1.36	83,852	1.05	37,779	.69
Total—American Motors Corp.	**217,332**	**5.12**	**114,084**	**1.86**	**104,185**	**1.79**	**161,790**	**2.03**	**95,182**	**1.73**
Chrysler	49,504	1.17	118,718	1.94	95,360	1.64	176,038	2.21	101,744	1.85
De Soto	36,700	.86	117,750	1.92	104,395	1.80	131,753	1.66	69,844	1.27
Dodge	114,665	2.70	293,616	4.80	205,820	3.54	316,584	3.98	151,761	2.76
Imperial	13,673	.32	37,945	.62	12,130	.21	....	.....	....	.....
Plymouth	366,758	8.63	655,006	10.70	452,918	7.80	746,361	9.39	396,702	7.20
Total—Chrysler Corp.	**581,300**	**13.68**	**1,223,035**	**19.98**	**870,623**	**14.99**	**1,370,736**	**17.24**	**720,051**	**13.08**
Edsel	26,563	.63	54,607	.89	....	.....	....	.....	....	.....
Ford	1,038,560	24.45	1,522,408	24.88	1,373,542	23.65	1,764,524	22.19	1,394,762	25.33
Lincoln	25,871	.61	37,870	.62	48,995	.84	41,226	.52	35,733	.65
Mercury	128,428	3.02	274,820	4.49	246,628	4.25	434,911	5.47	256,729	4.66
Total—Ford Motor Company	**1,219,422**	**28.71**	**1,889,705**	**30.88**	**1,669,165**	**28.74**	**2,240,661**	**28.18**	**1,687,224**	**30.64**
Buick	257,124	6.05	407,271	6.65	535,364	9.22	781,296	9.83	531,463	9.65
Cadillac	125,501	2.95	153,236	2.50	140,873	2.43	153,334	1.93	123,746	2.25
Chevrolet	1,255,943	29.57	1,522,549	24.88	1,621,018	27.92	1,830,038	23.03	1,414,365	25.67
Oldsmobile	310,795	7.32	390,091	6.37	432,903	7.46	643,459	8.09	433,810	7.88
Pontiac	219,823	5.18	343,298	5.62	332,268	5.72	581,860	7.32	370,887	6.73
Total—General Motors Corp.	**2,169,186**	**51.07**	**2,816,445**	**46.02**	**3,062,426**	**52.75**	**3,989,987**	**50.19**	**2,874,271**	**52.18**
Packard	1,745	.04	5,495	.09	13,432	.23	68,674	.86	27,307	.50
Studebaker	55,124	1.30	67,394	1.10	82,955	1.43	112,723	1.42	85,660	1.55
Total—Studebaker-Packard Corp.	**56,869**	**1.34**	**72,889**	**1.19**	**96,387**	**1.66**	**181,397**	**2.29**	**112,967**	**2.05**
Kaiser	....	.....	....	.....	....	.....	1,021	.01	5,756	.10
Willys	....	.....	....	.....	....	.....	4,778	.06	9,339	.17
Total—Willys Motors	....	.....	....	.....	....	.....	**5,799**	**.07**	**15,095**	**.27**
Checker Cab	3,267	.08	3,871	.07	3,970	.07	7	.....	2,627	.05
Total—Passenger Cars	**4,247,376**	**100.00**	**6,120,029**	**100.00**	**5,806,756**	**100.00**	**7,950,377**	**100.00**	**5,507,417**	**100.00**
TRUCKS AND BUSES										
Chevrolet	278,632	32.00	351,740	32.08	353,510	31.91	393,322	31.48	325,515	31.75
G.M.C.	61,768	7.09	69,675	6.35	91,485	8.26	104,759	8.38	76,243	7.44
Diamond T	5,981	.69	5,845	.53	5,061	.46	5,176	.41	3,563	.35
Divco	2,919	.34	2,871	.26	3,570	.32	3,839	.31	2,959	.29
Dodge and Fargo	58,671	6.74	76,616	6.99	91,516	8.26	95,685	7.66	91,935	8.97
Ford	242,890	27.89	337,123	30.75	297,308	26.84	373,898	29.92	302,796	29.54
F.W.D.	1,227	.14	1,073	.10	1,645	.15	1,011	.08	857	.08
International	81,213	9.33	121,775	11.11	137,840	12.44	129,830	10.39	95,095	9.28
Mack	14,306	1.64	17,308	1.58	18,304	1.65	15,298	1.22	7,223	.70
Reo*	....	.....	1,602	.15	3,789	.34	5,190	.42	7,203	.70
Studebaker	10,563	1.21	13,642	1.24	15,222	1.37	19,793	1.58	15,608	1.52
White	17,403	2.00	17,173	1.57	17,359	1.57	16,783	1.34	12,737	1.24
Willys	92,099	10.58	75,860	6.92	64,883	5.86	78,922	6.32	77,054	7.52
Other Trucks	3,129	.35	4,143	.38	6,304	.57	6,070	.49	6,401	.62
Total—Trucks	**870,801**	**100.00**	**1,096,446**	**100.00**	**1,107,796**	**100.00**	**1,249,576**	**100.00**	**1,025,189**	**100.00**
Buses	3,039	.....	3,956	.....	4,206	.....	4,096	.....	4,123	.....
Total—Trucks and Buses	**873,840**	.....	**1,100,402**	.....	**1,112,002**	.....	**1,253,672**	.....	**1,029,312**	.....
Total—Motor Vehicles	**5,121,216**	.....	**7,220,431**	.....	**6,918,758**	.....	**9,204,049**	.....	**6,536,729**	.....

*—Included with White after June 5, 1957.

Passenger Car Factory Sales by Body Types

As reported by the Automobile Manufacturers Association

Body Types	1958 Units	1958 % of Total	1957 Units	1957 % of Total	1956 Units	1956 % of Total	1955 Units	1955 % of Total
4-Door Sedans	1,480,550	34.77	1,951,615	31.92	2,005,432	34.49	3,043,564	38.43
2-Door Sedans	698,799	16.41	893,757	14.62	1,124,854	19.34	1,677,430	21.18
Business Coupes	6,278	.15	13,832	0.23	10,719	0.18	13,408	0.17
Convertible Coupes	193,717	4.55	284,682	4.66	198,962	3.42	239,790	3.03
Hard Tops—2-Door	657,056	15.43	1,140,131	18.65	1,060,541	18.23	1,666,984	21.05
Hard Tops—4-Door	543,397	12.76	932,992	15.26	763,057	13.13	501,814	6.34
Station Wagons—2-Door*	107,814	2.53	196,119	3.21	169,508	2.91	254,994	3.22
Station Wagons—4-Door*	564,858	13.27	694,178	11.35	469,000	8.06	504,428	6.37
Chassis**	5,343	.13	6,038	0.10	14,036	0.24	17,774	0.21
Total	4,257,812	100.00	6,113,344	100.00	5,816,109	100.00	7,920,186	100.00

*—Includes only station wagons produced on passenger car chassis. **—Includes miscellaneous body types on passenger car chassis.

Motor Bus Factory Sales, by Type, and Their Wholesale Value

Does not include Nonintegral School Buses

As reported by the Automobile Manufacturers Association

	U. S. DOMESTIC MARKET							
Year	City Type	Intercity Type	Special Types†	Total Domestic Market	Total Export Market	Total Factory Sales	Wholesale Value	Average Wholesale Value
1958	1,732	795	153	2,680	336	3,016	$ N.A.	$ N.A.
1957	1,857	1,100	353	3,310	523	3,833	73,993,000	19,304
1956	2,501	722	394	3,617	447	4,064	75,836,000	18,660
1955	2,317	916	366	3,599	424	4,023	74,207,000	18,446
1954	2,407	834	541	3,782	336	4,118	71,973,000	17,478
1953	2,290	855	586	3,731	326	4,057	68,271,000	16,828
1952	1,989	691	1,823	4,503	872	5,376	77,339,000	14,389
1951	4,754	1,233	2,797	8,784	676	9,460	135,650,000	14,339

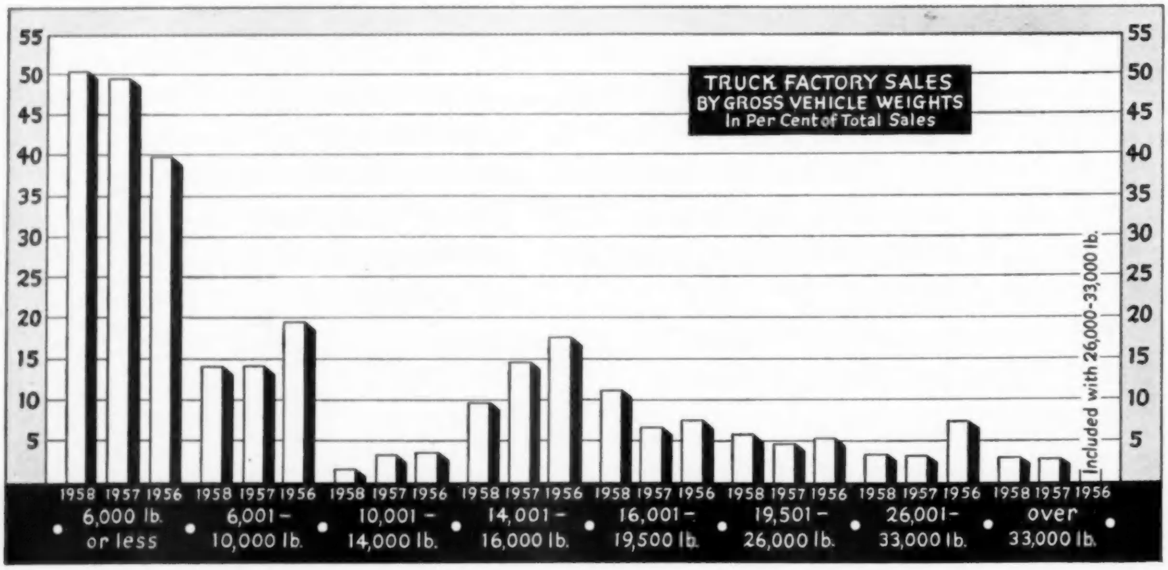
†—Includes Integral School Buses.

Annual Motor Truck Factory Sales by G.V.W., 1954-1958

From data supplied by the Automobile Manufacturers Association

	6,000 lb. and less	6,001-10,000 lb.	10,001-14,000 lb.	14,001-16,000 lb.	16,001-19,500 lb.	19,501-26,000 lb.	26,001-33,000 lb.	Over 33,000 lb.	Total
Factory Sales									
1958	446,292	127,157	14,006	81,798	96,526	50,356	29,781	28,362	874,278
1957	546,734	160,409	36,857	162,888	72,100	53,163	37,533	33,659	1,103,343
1956	438,676	209,401	39,918	192,157	82,493	56,492	81,280	**	1,100,417
1955	585,886	212,571	46,905	225,755	65,717	43,422	64,827	**	1,245,083
1954	482,515	186,733	39,073	195,121	48,560	45,111	40,943	**	1,038,056
Per Cent of Total									
1958	51.1%	14.5%	1.6%	9.4%	11.0%	5.8%	3.4%	3.2%	100.0%
1957	49.6%	14.5%	3.3%	14.8%	6.5%	4.8%	3.4%	3.1%	100.0%
1956	39.9%	19.0%	3.6%	17.5%	7.5%	5.1%	7.4%	....	100.0%
1955	47.0%	17.1%	3.8%	18.1%	5.3%	3.5%	5.2%	....	100.0%
1954	46.5%	18.0%	3.8%	18.8%	4.7%	4.3%	3.9%	....	100.0%

**—Included with 26,001 to 33,000 group.



Factory Sales of Special Types of Vehicles

As reported by the Automobile Manufacturers Association

Type of Vehicle	1958	1957	1956	1955	1954	1953	1952
Station Wagons[1]	706,414	918,371	656,696	780,151	364,234	318,178	189,651
Motor Coaches[2]	3,016	3,833	4,064	4,023	4,118	4,057	5,375
School Bus Chassis	19,719	23,465	22,714	26,535	22,465	21,284	19,452
Trucks with Cab-over-Engine	40,948	53,053	44,812	45,815	26,268	24,712	19,592
Trucks with Diesel Engines	25,172	24,455	25,797	16,876	10,546	10,872	13,165
Buses with Diesel Engines	2,601	3,174	3,481	3,333	2,832	2,732	2,671
Trucks with 6 wheels, 3 axles	19,313	25,684	33,920	26,060	16,364	14,864	15,585
Multi-Stop Trucks	22,364	24,801	26,736	23,853	19,507	19,246	18,493
Ambulances and Funeral Vehicles	N.A.	2,917	2,281	2,661	2,880	3,034	2,662

Truck Trailer Shipments by Type, 1957-1958

In Units and Their Value

As reported by the Industry Division, Bureau of the Census

	1958		1957	
	Units	Value	Units	Value
Vans				
Insulated and refrigerated	3,453	$ 27,160,000	4,497	$ 34,469,000
Steel	337	2,693,000	596	4,309,000
Aluminum	3,116	24,467,000	3,901	30,160,000
Semi-insulated	513	3,362,000	676	4,730,000
Steel	513	3,362,000	119	1,330,000
Aluminum			557	3,400,000
Furniture	1,468	6,453,000	1,562	6,636,000
Steel / Aluminum	1,468	6,453,000	1,563	6,636,000
All other closed-top vans	18,166	101,795,000	20,935	111,865,000
Steel	6,072	28,557,000	9,259	42,572,000
Aluminum	12,094	73,238,000	11,676	69,293,000
Open-top vans	2,366	12,094,000	3,191	16,354,000
Steel	1,009	4,635,000	1,585	7,433,000
Aluminum	2,132	7,459,000	1,606	8,921,000
Total—Vans	**25,966**	**$150,864,000**	**30,862**	**$174,054,000**
Tanks				
Petroleum	4,004	30,997,000	4,664	38,333,000
All other	1,310	14,152,000	1,661	15,477,000
Total—Tanks	**5,314**	**$ 45,149,000**	**6,325**	**$ 53,810,000**
Pole, Pipe and Logging				
Single axle	325	431,000	519	657,000
Tandem axle	567	2,077,000	709	2,288,000
Total	**892**	**$ 2,508,000**	**1,228**	**$ 2,945,000**
Platforms,				
Racks, livestock, and stake	1,249	5,308,000	2,718	10,646,000
Grain bodies, all types	1,079	3,741,000	1,341	4,398,000
Flats, all types	6,329	21,751,000	6,654	22,156,000
Total—Platforms	**8,657**	**$ 30,800,000**	**10,713**	**$ 37,200,000**
Low-bed heavy haulers	2,335	10,012,000	2,884	11,781,000
Dump trailer	2,426	11,085,000	2,070	9,853,000
All other trailers	2,156	10,554,000	3,608	14,708,000
Total—Complete Trailers	**47,746**	**$260,972,000**	**57,690**	**$304,351,000**
Trailer Chassis	3,242	8,329,000	4,406	11,437,000
Total—Trailers and Chassis	**50,988**	**$269,301,000**	**62,096**	**$315,788,000**

Truck Trailer Shipments

In Units and Their Value

Industry Division, Bureau of the Census

1958	Units	Value
January	3,397	$ 18,740,000
February	3,024	16,622,000
March	3,468	18,977,000
April	3,559	19,111,000
May	3,882	20,561,000
June	3,766	19,974,000
July	3,880	20,912,000
August	4,219	22,792,000
September	4,442	24,270,000
October	4,989	28,026,000
November	4,205	23,620,000
December	4,915	27,366,000
Total—1958	**47,746**	**$260,971,000**
1957		
January	4,915	$ 25,708,000
February	5,136	27,244,000
March	5,382	27,767,000
April	5,411	29,179,000
May	5,628	29,088,000
June	4,820	25,651,000
July	4,374	22,733,000
August	5,044	26,493,000
September	4,475	24,367,000
October	4,924	26,173,000
November	4,024	20,974,000
December	3,557	18,974,000
Total—1957	**57,690**	**$304,351,000**

1958 Model Year Factory Installations of Passenger Car Optional Equipment

Shown as Per Cent of Each Car's Production

Based on Survey by Automotive Industries

	Ford	Lincoln	Merc.	Edsel	Plymouth	Chrys.	Imp.	De Soto	Dodge	Cad.	Olds.	Buick	Chev.	Pontiac	AMC	Stud.-Packard
Automatic Trans.	69.1	STD	94.2	91.9	78.6	99.9	100.0	99.5	96.8	100.0	98.9	98.5	68.7	97.0	49.3	41.1
Standard Trans.	25.8	NA	4.8	6.1	19.7	0.1	NA	0.5	3.2	NA	1.1	1.5	29.1	3.0	29.6	33.4
Overdrive Trans.	5.1	NA	1.0	2.0	1.7	NA	NA	NA	NA	NA	NA	NA	2.2	NA	21.1	25.5
Power Brakes	8.4	STD	39.2	43.3	15.9	80.5	100.0	69.6	35.3	100.0	86.6	60.3	13.0	54.0	22.8	9.7
Power Steering	27.5	STD	50.5	48.7	33.9	97.4	100.0	90.3	65.3	100.0	85.9	69.2	24.1	54.0	17.1	14.6
Power Seats	1.4	62.0	7.9	7.6	0.7	27.1	93.6	11.1	3.2	74.8	19.4	14.1	0.5	2.4	NA	0.46
Power Windows	1.2	85.0	6.6	5.6	1.0	16.2	92.9	9.3	2.7	77.9	17.6	13.4	1.0	3.0	0.1	.87
Radio	61.5	99.0	80.8	80.3	44.9	82.2	96.9	67.9	53.2	98.8	92.5	87.6	36.5	91.0	36.1	28.2
Heaters	93.1	99.0	95.9	91.0	92.9	98.6	99.4	99.4	96.1	98.9	97.9	97.6	92.4	98.0	92.3	98.7
White Walls	53.4	98.0	80.3	73.2	52.0	83.5	86.0	84.7	75.8	98.6	85.9	83.6	44.8	72.0	40.7	40.1
Air Conditioning	1.4	34.0	3.7	1.6	2.2	10.6	33.3	6.2	3.6	35.0	12.5	7.5	1.8	5.0	4.8	.4
Tinted Glass	12.3	85.0	35.9	32.9	19.0	48.7	84.6	36.3	26.4	90.3	38.0	52.8	13.4	19.7	13.2	10.3
Windshield Washers	31.3	STD	41.0	61.4	31.9	92.7	100 0	48.4	40.9	100.0	80.1	71.8	NA	31.0	29.1	14.4
Back-up Lights	34.6	STD	83.5	43.4	42.4	100.0	100.0	80.4	85.9	100.0	65.2	78.3	NA	90.0	39.2	53.0
V-8 Engines	76.1	STD	STD	STD	76.9	STD	STD	STD	94.3	100.0	100.0	100.0	62.4	STD	15.2	45.8
6-Cylinder Engines	23.9	NA	NA	NA	23.1	NA	NA	NA	5.7	NA	NA	NA	37.6	NA	84.8	54.2
Air Suspension	0.3	0.2	0	0	NA	NA	NA	NA	NA	14.2	6.1	10.7	2.0	3.5	.04	NA

Tractor Shipments by Years

In Units and Their Value

Industry Division, Bureau of the Census

	Number of Shipments	Value at Plant	Average Value per Tractor
WHEEL TYPE (EXCEPT OFF-HIGHWAY)			
1958	234,132	$496,419,000	$ 2,120
1957	231,061	419,648,000	1,816
1956	222,581	389,841,000	1,751
1955	326,437	518,731,000	1,589
1954	253,673	396,466,000	1,563
CONTRACTORS' OFF-HIGHWAY TYPE			
1958*	3,338	$ 69,652,000	$20,866
1957	5,417	104,112,000	19,219
1956	5,339	94,587,000	17,716
1955	4,144	64,173,000	15,486
1954	3,019	46,801,000	15,502
TRACKLAYING TYPE			
1958†	28,491	$273,755,000	$ 9,608
1957	32,863	306,126,000	9,315
1956	55,417	471,384,000	8,506
1955	48,891	359,443,000	7,352
1954	40,374	267,918,000	6,636
TOTAL—ALL TYPES			
1958	265,961	$839,826,000	......
1957	269,341	829,886,000	......
1956	283,337	955,812,000	......
1955	379,472	942,347,000	......
1954	297,066	711,185,000	......

*—Data for nine months only.
†—Not strictly comparable with other years, as tractors for integral front-end loaders have been eliminated, whereas they were included prior to 1958.

Shipments of Garden Tractors

In Units and Their Value

As reported by the Industry Division, Bureau of the Census

	1957 Number	1957 Value	1956 Number	1956 Value
Garden Tractors				
Riding-Type				
Under 6 engine hp	5,200	$ 868,000	10,027	$ 2,167,000
6 to 8 engine hp } 8 engine hp and over }	4,734	1,732,000	1,563	590,000
8 engine hp and over			1,424	533,000
Total	9,934	$2,600,000	13,014	$ 3,290,000
Walking-Type				
2 engine hp and less	5,822	$ 528,000	9,584	$ 812,000
Over 2 engine hp	36,024	6,505,000	53,115	8,821,000
Total	41,846	$ 7,033,000	62,699	$ 9,633,000
Motor Tillers				
2 engine hp and less	26,047	$ 2,387,000	35,836	$ 3,468,000
Over 2 engine hp	103,534	9,995,000	91,682	8,724,000
Total	129,581	$12,382,000	127,518	$12,192,000
Total—Tractors & Tillers	181,361	$22,015,000	203,231	$25,115,000

Shipments of Integral Shovel-Loaders

As reported by the Industry Division, Bureau of the Census

Capacities—cu. yds.	1957 Units	1957 Value*	1958† Units	1958† Value*
WHEEL TYPE				
Under 1 } 1 and under 1½ }	2,318	$9,981	2,921	$21,558
1 and under 1½	3,229	28,435		
1½ and over	2,154	30,176	2,054	29,704
Total	7,701	$68,592	4,975	$51,262
TRACKLAYING TYPE				
Under 1½	2,660	$21,246	2,135	$15,796
1½ and under 2¼	4,520	48,478	3,163	35,012
2¼ and over	1,658	27,499	1,074	19,217
Total	8,838	$97,223	6,372	$70,025
Total—All Types	16,539	$165,795	11,347	$121,287

*—In thousands. †—Data for nine months only.

Tractor Shipments by Type and Hp Ratings

In Units and Their Value

As reported by the Industry Division, Bureau of the Census

Type and Hp	1958 Units	1958 Value	1957 Units	1957 Value
Wheel Type (except Contractors' Off-Highway)				
9-29 belt hp } 30-34 belt hp }	46,131	N.A.	34,735	$ 38,759,000
30-34 belt hp			32,009	49,793,000
35-39 belt hp	46,083	N.A.	30,583	50,905,000
40-49 belt hp	48,381	N.A.	66,657	114,459,000
50-54 belt hp	41,233	N.A.	23,722	52,277,000
55-59 belt hp	28,333	N.A.	31,511	75,256,000
60 belt hp and over	23,971	N.A.	11,844	38,199,000
Total—Wheel Type	234,132	$496,419,000	231,061	$419,648,000
Wheel Type—Contractors' Off-Highway				
Under 169 brake hp	560	$ 6,834,000	931	$ 10,727,000
170-249 brake hp	994	17,886,000	1,767	30,027,000
250 brake hp and over	1,784	44,932,000	2,719	63,358,000
Total—Contractors' Off-Highway	3,338*	$ 69,652,000*	5,417	$104,112,000
Tracklaying Types†				
Under 49 drawbar hp	11,150	N.A.	13,561	$ 42,063,000
50-74 drawbar hp	4,736	N.A.	4,832	32,666,000
75-99 drawbar hp	3,336	N.A.	4,360	47,614,000
100-154 drawbar hp } 155 drawbar hp and over }	4,545	N.A.	10,110	183,783,000
155 drawbar hp and over	4,724	N.A.		
Total—Tracklaying Types†	28,491†	$273,755,000†	32,863	$306,126,000
Garden Tractors, incl. Motor Tillers	N.A.	N.A.	181,361	$ 22,015,000
Total—All Tractors	N.A.	N.A.	450,712	$851,901,000

*—Data for nine months only.
†—Not exactly comparable for data in earlier years. For earlier years tractors shipped as integral front-end leaders were included in tracklaying tractor totals. For 1958 such integral front-end loaders are not included with tracklaying tractors.

Production of Tractors by Type of Fuel Used

As reported by the Industry Division, Bureau of the Census

	WHEEL TYPE TRACTORS							TRACKLAYING TYPE				
	Gasoline		Diesel		L.P.G.			Gasoline		Diesel		
Year	Units	% of Total	Units	% of Total	Units	% of Total	Total Units	Units	% of Total	Units	% of Total	Total Units
1958*	167,124	71.32	55,092	23.51	12,120	5.17	234,336	10,263*	43.08*	13,560*	56.92*	23,823*
1957	179,142	78.21	37,352	16.31	12,556	5.48	229,050	10,470	28.45	26,332	71.55	36,802
1956	177,077	82.49	26,762	12.47	10,815	5.04	214,654	12,053	20.92	45,558	79.08	57,611
1955	277,105	83.94	41,506	12.57	11,530	3.49	330,141	9,037	19.24	37,936	80.76	46,973
1954	213,008	86.68	27,899	11.35	4,848	1.97	245,755	6,657	16.89	32,747	83.11	39,404

*—Tracklaying tractors for 1958 are not exactly comparable with previous years. Crawler tractors for integral front-end loaders have been excluded from the tractor totals in 1958 but included in other years.

CANADIAN STATISTICS

From Dominion Bureau of Statistics

Motor Vehicle Production in Canada

In Units and Their Value

Year	Passenger Cars: Number of Units†	Passenger Cars: Wholesale Value	Passenger Cars: Average Wholesale Value	Trucks and Buses: Number of Units†	Trucks and Buses: Wholesale Value	Trucks and Buses: Average Wholesale Value	Total: Number of Units	Total: Wholesale Value
1925	135,573	$ 86,158,773	$ 635	26,397	$ 12,234,486	$ 463	161,970	$ 98,393,259
1926	166,887	106,000,203	635	37,840	16,629,334	439	204,727	122,629,537
1927	146,421	100,962,211	689	32,633	14,942,017	458	179,054	115,904,228
1928	197,848	127,263,877	643	44,206	21,913,122	496	242,054	149,176,999
1929	203,307	134,023,280	659	59,318	29,474,395	497	262,625	163,497,675
1930	121,337	75,253,581	620	32,035	16,513,225	515	153,372	91,766,806
1931	65,072	42,634,173	655	17,487	10,330,763	591	82,559	52,964,936
1932	50,694	32,490,129	641	10,095	6,070,667	601	60,789	38,560,796
1933	53,849	32,568,268	605	12,003	6,062,195	505	65,852	38,630,463
1934	92,647	57,260,156	618	24,205	12,770,318	528	116,852	70,030,474
1935	135,562	79,209,276	584	37,315	19,803,771	531	172,877	99,013,047
1936	128,369	76,814,258	598	33,790	19,140,946	566	162,159	95,955,204
1937	153,946	93,368,282	610	54,417	30,389,011	558	207,463	123,757,293
1938	123,761	81,661,687	660	42,325	26,497,038	626	166,086	108,158,725
1939	108,369	71,101,304	656	47,057	28,072,712	597	155,426	99,173,916
1940	109,911	83,544,445	760	113,102	91,191,516	806	223,013	174,735,961
1941	96,603	81,167,694	840	173,588	163,414,253	941	270,191	244,581,947
1942	12,236	10,305,013	842	216,057	229,103,128	1,060	228,293	239,408,741
1943	......	....	..	178,064	222,393,092	1,249	178,064	222,393,092
1944	......	....	...	158,038	213,259,582	1,349	158,038	213,259,582
1945	1,868	1,638,118	877	130,777	167,103,012	1,278	132,645	168,741,130
1946	91,871	82,847,330	902	79,657	81,204,338	1,019	171,528	164,051,668
1947	167,257	182,161,183	1,089	90,758	116,357,486	1,282	258,015	298,518,669
1948	166,819	210,799,512	1,264	96,941	137,228,722	1,415	263,760	348,028,234
1949	193,556	277,660,998	1,434	99,028	146,697,354	1,481	292,584	424,358,352
1950	284,076	447,029,182	1,574	106,026	163,942,858	1,546	390,102	610,972,040
1951	282,714	438,613,532	1,551	132,706	212,806,695	1,604	415,420	651,420,227
1952	283,534	417,654,448	1,473	150,176	253,247,296	1,680	433,710	670,901,744
1953	360,385	539,524,001	1,497	120,574	199,082,949	1,651	480,959	738,606,950
1954	297,191	436,828,440	1,521	69,892	122,291,809	1,750	359,083	559,112,249
1955	375,028	610,683,424	1,628	78,569	143,455,714	1,836	453,597	754,139,138
1956	374,312	646,533,642	1,727	93,552	190,224,699	2,033	467,864	836,748,341
1957	340,016	639,852,313	1,882	71,868	149,668,953	2,083	411,884	789,521,266
1958	298,344	....	....	61,281	....	....	359,625	....

†—Production figures include all wheeled vehicles for military nse. Universal carriers and scout cars are not included.

Factory Shipments of Made-in-Canada Vehicles, by Months

Month	Passenger Cars 1958	Passenger Cars 1957	Passenger Cars 1956	Trucks and Buses 1958	Trucks and Buses 1957	Trucks and Buses 1956	Total Motor Vehicles 1958	Total Motor Vehicles 1957	Total Motor Vehicles 1956
January	27,144	38,377	21,535	4,396	6,726	4,620	31,540	45,103	26,155
February	27,276	29,661	22,143	4,812	6,704	5,482	32,088	36,365	27,625
March	30,164	38,063	37,602	5,860	6,898	9,062	36,024	44,961	46,664
April	32,980	40,522	49,072	6,814	8,348	11,397	39,794	48,870	60,470
May	35,137	40,103	44,842	6,381	8,925	12,180	41,518	49,028	57,022
June	30,251	32,197	42,447	5,738	7,041	10,487	35,989	39,238	52,934
July	20,892	29,801	38,096	5,077	5,956	9,419	25,969	35,757	47,515
August	5,767	15,054	19,362	2,769	3,895	6,678	8,536	18,949	26,040
September	6,352	7,226	6,196	3,539	2,860	5,133	9,891	10,086	11,329
October	18,984	14,948	17,413	5,028	4,046	7,298	24,012	18,994	24,711
November	30,330	32,004	35,676	5,467	5,907	7,548	35,797	37,911	43,224
December	33,067	22,960	39,927	5,400	4,562	4,248	38,467	26,622	44,175
Total	298,344	340,016	374,312	61,281	71,868	93,552	359,625	411,884	467,864

1957 Canadian Motor Vehicle Registrations—by Provinces

Province	Passenger Cars	Motor Trucks	Motor Buses	Other Motor Vehicles	Total Motor Vehicles	Motor-cycles	Trailers
Newfoundland	34,361	12,440	158	735	47,694	288	537
Prince Edward Island	14,595	6,462	10	2,532	23,599	126	1,298
Nova Scotia	110,444	35,355	700	6,724	153,223	1,085	7,312
New Brunswick	86,518	26,794	486	1,023	114,821	517	4,992
Quebec	669,214	190,006	3,410	25,395	888,025	13,040	49,022
Ontario	1,431,438	345,961	4,578	——	1,781,977	11,522	109,150
Manitoba	182,555	59,897	199	1,935	244,586	1,602	16,835
Saskatchewan	186,543	110,407	129	2,584	299,663	663	14,878
Alberta	276,679	123,474	3,084	——	403,237	1,992	1,989
British Columbia	371,727	112,092	1,315	4,025	489,159	3,714	29,663
Yukon and N. W. Territory	3,451	2,461	34	236	6,182	7	469
Total—Canada—1957	3,367,525	1,025,349	14,103	45,189	4,452,166	34,956	236,145
Total—Canada—1956	3,172,853	989,434	13,129	43,760	4,219,176	35,507	213,748
Total—Canada—1955	2,916,684	931,433	12,437	45,803	3,906,357	36,320	189,998
Total—Canada—1954	2,682,639	869,183	12,692	43,109	3,607,623	37,661	180,790

NEW REGISTRATIONS

All New Registration data on this and the following two pages are based on reports from the R. L. Polk & Co.

New Passenger Car Registrations by Makes, by Years

Make of Car	1958 Units	1958 % of Total	1957 Units	1957 % of Total	1956 Units	1956 % of Total	1955 Units	1955 % of Total	1954 Units	1954 % of Total
NEW REGISTRATIONS—U. S. CARS										
Hudson	....	.....	4,596	.07	11,822	.20	20,522	.29	34,806	.63
Nash	....	.....	9,474	.16	25,271	.42	37,197	.52	41,116	.74
Rambler	186,222	4.00	91,469	1.53	70,867	1.19	72,227	1.00	35,613	.64
Total—American Motors	**186,222**	**4.00**	**105,539**	**1.76**	**107,960**	**1.81**	**129,946**	**1.81**	**111,535**	**2.01**
Chrysler	58,537	1.26	106,915	1.78	106,853	1.79	144,618	2.02	100,775	1.82
De Soto	47,864	1.03	103,915	1.74	100,766	1.69	118,062	1.65	76,739	1.39
Dodge	135,494	2.91	257,488	4.30	220,208	3.70	284,323	3.96	154,789	2.80
Imperial	14,807	.32	33,017	.55	10,460	.18	11,840	.16	966	.02
Plymouth	390,832	8.40	595,503	9.97	483,756	8.12	647,352	9.03	381,078	6.87
Total—Chrysler Corp.	**647,534**	**13.92**	**1,096,359**	**18.34**	**922,043**	**15.48**	**1,206,195**	**16.82**	**714,347**	**12.90**
Continental	....	.....	2,490	.04	1,564	.03	606	.01	....	.....
Edsel	38,488	.83	26,681	.45	....	.....	....	.....	....	.....
Ford	1,028,300	22.11	1,493,617	24.97	1,375,343	23.09	1,573,276	21.94	1,400,440	25.30
Lincoln	26,538	.57	34,808	.58	42,598	.72	35,017	.49	36,251	.65
Mercury	136,139	2.93	260,573	4.35	274,603	4.61	371,837	5.19	269,926	4.88
Total—Ford Motor Co.	**1,229,465**	**26.44**	**1,818,169**	**30.39**	**1,694,108**	**28.45**	**1,980,736**	**27.63**	**1,706,617**	**30.83**
Buick	263,890	5.67	394,553	6.60	529,371	8.89	737,879	10.29	513,497	9.28
Cadillac	122,549	2.63	141,209	2.36	132,952	2.23	141,038	1.97	110,328	1.99
Chevrolet	1,233,623	26.52	1,456,288	24.34	1,565,399	26.29	1,640,681	22.88	1,417,453	25.61
Oldsmobile	306,533	6.59	371,596	6.21	437,896	7.35	589,515	8.22	407,150	7.35
Pontiac	229,742	4.94	319,719	5.34	358,668	6.02	530,007	7.39	358,167	6.47
Total—General Motors Corp.	**2,156,337**	**46.35**	**2,683,365**	**44.85**	**3,024,286**	**50.78**	**3,639,120**	**50.75**	**2,806,595**	**50.70**
Packard	2,580	.06	5,189	.08	28,396	.48	52,103	.73	38,396	.69
Studebaker	47,744	1.03	62,565	1.05	76,402	1.28	95,761	1.33	95,914	1.74
Total—Studebaker-Packard Corp.	**50,324**	**1.09**	**67,754**	**1.13**	**104,798**	**1.76**	**147,864**	**2.06**	**134,310**	**2.43**
All Other U. S. Makes	3,508	.08	4,329	.07	3,866	.07	7,582	.11	29,657	.54
Total—U. S. Cars	**4,273,390**	**91.88**	**5,775,515**	**96.54**	**5,857,061**	**98.35**	**7,111,443**	**99.18**	**5,503,061**	**99.41**
NEW REGISTRATIONS—FOREIGN CARS										
Austin	....	.....	....	.....	1,125	.02	1,596	.02	1,528	.03
Fiat	21,815	.47	....	.....	....	.....	....	.....	....	.....
Ford	33,418	.72	17,062	.28	4,230	.07	2,189	.03	1,622	.03
Hillman	18,897	.41	11,124	.19	3,415	.06	2,778	.04	2,430	.04
Jaguar	....	.....	....	.....	3,685	.06	3,573	.05	3,365	.06
Metropolitan	12,336	.27	11,791	.20	7,145	.12	6,807	.09	7,018	.13
MG	....	.....	13,496	.23	6,094	.10	3,001	.04	3,454	.06
Renault	48,055	1.03	22,586	.38	....	.....	....	.....	....	.....
Volkswagen	78,221	1.68	64,242	1.07	50,001	.84	28,907	.41	6,343	.11
Other Foreign	164,816	3.54	66,526	1.11	22,492	.38	9,614	.14	6,643	.13
Total—Foreign Cars	**377,558**	**8.12**	**206,827**	**3.46**	**98,187**	**1.65**	**58,465**	**.82**	**32,403**	**.59**
Total—U. S. and Foreign Cars	**4,650,948**	**100.00**	**5,982,342**	**100.00**	**5,955,248**	**100.00**	**7,169,908**	**100.00**	**5,535,464**	**100.00**

New Truck Registrations by Makes, by Years

Make of Truck	1958 Units	1958 % of Total	1957 Units	1957 % of Total	1956 Units	1956 % of Total	1955 Units	1955 % of Total	1954 Units	1954 % of Total
Autocar	*	.....	*	.....	*	.....	*	.....	1,041	.13
Brockway	959	.13	738	.09	884	.10	1,144	.12	1,340	.16
Chevrolet	247,191	34.06	290,960	33.91	302,145	33.78	329,791	34.46	293,079	35.34
Diamond T	2,930	.40	3,472	.40	4,037	.45	3,697	.39	2,701	.33
Divco	2,164	.30	2,558	.30	3,112	.35	3,298	.34	2,505	.30
Dodge	36,976	5.09	49,431	5.76	57,651	6.45	66,208	6.92	60,658	7.32
Federal	†	.....	†	.....	†	.....	56	.....	248	.03
Ford	208,489	28.73	277,301	32.32	263,735	29.49	295,900	30.93	267,799	32.30
F.W.D.	381	.05	433	.05	481	.05	315	.03	393	.05
G.M.C.	55,873	7.70	62,165	7.24	82,266	9.20	84,877	8.87	66,644	8.04
International	89,690	12.36	96,956	11.30	108,014	12.08	100,441	10.50	84,222	10.15
Kenworth	860	.12	1,006	.12	1,239	.14	1,182	.12	697	.08
Mack	11,862	1.63	13,312	1.55	13,190	1.47	10,932	1.14	6,098	.74
Peterbilt	416	.06	497	.06	609	.07	424	.04	344	.04
Reo	*	.....	2,067	.24	2,974	.33	3,121	.33	2,283	.28
Studebaker	4,119	.57	6,547	.76	8,708	.97	10,817	1.13	10,193	1.23
White	12,148	1.67	12,491	1.45	15,137	1.69	14,372	1.50	10,340	1.25
Willys-Jeep	7,650	1.05	6,678	.78	9,131	1.02	10,441	1.09	7,598	.92
Willys-Truck	14,860	2.05	15,327	1.79	14,357	1.61	16,811	1.76	9,925	1.20
All Other U. S. Trucks	915	.13	884	.10	1,218	.14	947	.10	545	.06
Foreign Trucks	28,320	3.90	15,262	1.78	5,460	.61	2,227	.23	448	.05
Total—All Trucks	**725,803**	**100.00**	**858,085**	**100.00**	**894,366**	**100.00**	**957,001**	**100.00**	**829,101**	**100.00**

*—Included with White. †—Included with All Others.

NEW REGISTRATIONS

New Car and Truck Registrations, by Months, 1957-1958

Month	NEW PASSENGER CARS 1958 Units	NEW PASSENGER CARS 1958 % of Total	NEW PASSENGER CARS 1957 Units	NEW PASSENGER CARS 1957 % of Total
January	381,932	8.21	437,320	7.31
February	333,580	7.17	438,725	7.33
March	400,501	8.61	572,917	9.58
April	418,255	8.99	548,546	9.17
May	423,484	9.11	556,324	9.30
June	410,607	8.83	517,043	8.64
July	405,228	8.71	543,264	9.08
August	375,180	8.07	491,839	8.22
September	321,106	6.90	495,217	8.28
October	324,891	6.99	463,795	7.75
November	338,881	7.29	406,910	6.81
December	517,304	11.12	510,442	8.53
Total	4,650,949	100.00	5,982,342	100.00

Month	NEW TRUCKS 1958 Units	NEW TRUCKS 1958 % of Total	NEW TRUCKS 1957 Units	NEW TRUCKS 1957 % of Total
January	52,368	7.21	56,979	6.64
February	49,136	6.77	62,129	7.24
March	55,450	7.64	74,668	8.70
April	63,403	8.73	75,438	8.79
May	63,237	8.71	82,269	9.59
June	63,995	8.82	71,329	8.31
July	63,907	8.80	79,117	9.22
August	64,924	8.94	77,053	8.98
September	61,690	8.50	78,156	9.11
October	57,089	7.86	76,899	8.96
November	55,870	7.70	61,888	7.21
December	74,734	10.32	62,160	7.25
Total	725,803	100.00	858,085	100.00

Regional Sales of New Cars and Trucks

Zone	Region	NEW PASSENGER CARS 1958 Units	NEW PASSENGER CARS 1958 % of Total	NEW PASSENGER CARS 1957 Units	NEW PASSENGER CARS 1957 % of Total
1	New England	254,830	5.48	314,270	5.25
2	Middle Atlantic	889,992	19.14	1,140,474	19.07
3	South Atlantic	600,966	12.92	762,045	12.74
4	East North Central	1,092,061	23.48	1,466,332	24.51
5	East South Central	203,674	4.38	289,484	4.84
6	West North Central	444,311	9.55	522,513	8.73
7	West South Central	428,606	9.22	570,024	9.53
8	Mountain	174,022	3.74	208,411	3.48
9	Pacific	562,487	12.09	708,789	11.85
	Total—United States	4,650,949	100.00	5,982,342	100.00

Zone	NEW TRUCKS 1958 Units	NEW TRUCKS 1958 % of Total	NEW TRUCKS 1957 Units	NEW TRUCKS 1957 % of Total
1	29,154	4.02	34,883	4.07
2	88,980	12.26	108,488	12.65
3	101,026	13.92	121,730	14.19
4	113,690	15.66	142,704	16.63
5	50,844	7.00	62,057	7.23
6	84,372	11.62	84,731	9.87
7	110,112	15.17	125,246	14.60
8	52,935	7.29	58,693	6.84
9	94,690	13.06	119,553	13.92
Total	725,803	100.00	858,085	100.00

States comprising the various regions are: Zone 1: Conn., Mass., Me., N. H., R. I., Vt.—Zone 2: N. J., N. Y., Pa.—Zone 3: Del., D. of C., Fla., Ga., Md., N. C., S. C., Va., W. Va.—Zone 4: Ill., Ind., Mich., Ohio, Wisc.—Zone 5: Ala., Ky., Miss., Tenn.—Zone 6: Iowa, Kan., Minn., Mo., Neb., N. D.—Zone 7: Ark., La., Okla., Tex.—Zone 8: Ariz., Colo., Ida., Mont., Nev., N. M., Utah, Wyo.—Zone 9: Cal., Ore., Wash.

New Motor Vehicle Registrations, by States, 1956-1958

State	NEW PASSENGER CARS 1958	1957	1956	NEW TRUCKS 1958	1957	1956	TOTAL NEW VEHICLES 1958	1957	1956
Alabama	58,377	81,538	84,634	14,293	17,368	18,006	72,670	98,906	102,640
Arizona	26,871	35,762	32,221	8,427	9,680	8,272	35,298	45,442	40,493
Arkansas	30,700	41,949	45,369	11,421	13,950	15,805	42,121	55,899	61,174
California	450,588	571,185	556,164	72,651	91,990	92,374	523,239	663,175	648,538
Colorado	48,671	55,011	51,764	11,922	12,395	11,165	60,593	67,406	62,929
Connecticut	69,408	88,035	89,346	6,564	7,800	9,458	75,972	95,835	98,804
Delaware	15,996	19,266	18,867	2,266	2,590	2,696	18,262	21,856	21,563
District of Columbia	21,232	24,328	26,506	2,235	2,328	2,426	23,467	26,656	28,932
Florida	161,946	191,098	175,651	23,434	27,329	27,210	185,380	218,427	202,861
Georgia	84,118	107,883	121,633	17,585	21,664	25,233	101,703	129,547	146,866
Idaho	17,260	19,661	20,408	6,149	6,424	6,260	23,409	26,085	26,668
Illinois	318,914	398,523	398,174	30,916	35,460	37,191	349,830	433,983	435,365
Indiana	126,665	185,398	188,423	17,979	23,755	25,421	144,644	209,153	213,844
Iowa	79,611	86,674	83,895	14,986	14,060	13,603	94,597	100,734	97,498
Kansas	69,286	80,995	80,973	14,334	13,319	13,534	83,620	94,314	94,507
Kentucky	49,693	73,134	73,560	11,337	14,844	15,131	61,030	87,978	88,691
Louisiana	71,422	98,985	91,588	17,000	21,234	20,161	88,422	120,219	111,749
Maine	23,968	26,516	27,400	4,580	5,230	6,045	28,548	31,746	33,445
Maryland	84,094	101,124	102,841	8,679	10,548	11,293	92,773	111,672	114,134
Massachusetts	115,403	144,767	156,987	9,705	12,318	16,869	125,108	157,085	173,856
Michigan	265,317	365,813	348,138	23,187	31,050	34,987	288,504	396,863	383,125
Minnesota	97,175	122,349	115,709	14,381	16,393	16,579	111,556	138,742	132,288
Mississippi	32,105	45,605	52,058	11,759	14,019	16,504	43,864	59,624	68,562
Missouri	117,493	143,615	148,169	20,340	21,557	22,910	137,833	165,172	171,079
Montana	19,172	23,432	24,256	6,379	7,162	7,332	25,551	30,594	31,588
Nebraska	41,657	44,836	43,929	9,955	9,093	8,317	51,612	53,929	52,246
Nevada	9,706	10,758	10,945	2,522	3,044	3,111	12,228	13,802	14,056
New Hampshire	14,969	18,209	19,067	2,817	3,372	3,798	17,786	21,581	22,865
New Jersey	186,706	221,442	222,728	18,023	21,923	22,464	204,729	243,365	245,192
New Mexico	21,729	27,191	25,922	8,418	10,088	8,480	30,147	37,279	34,402
New York	424,740	544,567	511,096	37,549	46,229	49,602	462,289	590,796	560,698
North Carolina	75,215	99,493	107,139	17,898	21,065	23,118	93,113	120,558	130,257
North Dakota	18,710	22,996	19,446	4,817	5,182	4,818	23,527	28,178	24,264
Ohio	272,981	380,900	387,257	27,690	36,662	38,921	300,671	417,562	426,178
Oklahoma	58,937	73,025	75,446	16,749	17,698	17,266	75,686	90,723	92,712
Oregon	53,795	63,728	70,531	10,764	13,481	15,369	64,559	77,209	85,900
Pennsylvania	278,546	374,465	386,977	33,408	40,336	43,689	311,954	414,801	430,666
Rhode Island	19,476	23,330	23,996	2,964	3,203	3,103	22,440	26,533	27,099
South Carolina	36,137	47,761	52,355	7,634	8,881	10,102	43,771	56,642	62,457
South Dakota	20,379	21,048	19,874	5,559	5,127	4,788	25,938	26,175	24,662
Tennessee	63,499	89,207	90,605	13,455	15,826	17,293	76,954	105,033	107,898
Texas	267,547	356,065	345,288	64,942	72,364	70,443	332,489	428,429	415,731
Utah	20,182	24,241	24,029	5,038	5,486	5,295	25,220	29,727	29,324
Vermont	11,606	13,413	13,789	2,524	2,960	3,312	14,130	16,373	17,101
Virginia	89,709	116,123	117,344	13,805	18,101	19,304	103,514	134,224	136,648
Washington	58,103	73,876	75,960	11,275	14,082	15,398	69,378	87,958	91,358
West Virginia	32,519	54,969	53,408	7,490	9,224	9,414	40,009	64,193	62,822
Wisconsin	108,184	135,698	131,296	13,918	15,777	16,448	122,102	151,475	147,744
Wyoming	10,431	12,355	12,087	4,080	4,414	4,048	14,511	16,769	16,135
Total	4,650,948	5,982,342	5,955,248	725,803	858,085	894,366	5,376,751	6,840,427	6,849,614

New Car Registrations by Price Classes, by Years.†

	Under $2,000		$2,001-$2,500		$2,501-$3,500		Over $3,500		Total	
Years	Units	% of Total	Units	% of Total	Units	% of Total	Units	% of Total	Units	% of Total
1958	54,527	1.27	2,382,029	55.60	1,453,546	33.93	394,017	9.20	4,284,119	100.00
1957	25,172	.43	3,671,764	63.43	1,618,978	27.97	472,648	8.17	5,788,568	100.00
1956	861,532	14.70	3,351,256	57.15	1,388,061	23.68	261,808	4.47	5,862,657	100.00
1955	3,392,525	47.31	2,738,428	38.19	823,014	11.48	216,587	3.02	7,170,554	100.00
1954	3,353,668	60.47	1,406,734	25.37	580,076	10.46	205,283	3.70	5,545,761	100.00
1953	3,217,295	56.36	1,605,228	28.12	664,881	11.65	221,147	3.87	5,708,551	100.00
1952	2,182,576	52.88	1,323,341	29.64	540,344	13.09	181,411	4.39	4,127,672	100.00

†—Based on new passenger car registrations of American made cars only, as reported by R. L. Polk & Co.

Retail Dollar Volume of New Car Sales, by Price Classes, by Years.*

	Under $2,000		$2,001-$2,500		$2,501-$3,500		Over $3,500		Total	
Year	Dollars	% of Total	Dollars	% of Total	Dollars	% of Total	Dollars	% of Total	Dollars	% of Total
1958	$98,057,428	.85	$5,583,762,811	48.65	$4,048,026,185	35.26	$1,749,865,149	15.24	$11,479,711,573	100.00
1957	44,535,948	.29	8,318,411,583	54.62	4,585,537,672	30.11	2,281,590,981	14.98	15,230,076,184	100.00
1956	1,686,330,727	12.19	7,211,369,564	52.14	3,820,268,842	27.62	1,113,757,236	8.05	13,831,726,369	100.00
1955	6,444,944,567	40.57	6,239,448,805	39.27	2,320,724,016	14.61	882,544,448	5.55	15,887,661,836	100.00
1954	6,172,487,000	52.32	3,233,496,917	27.41	1,594,123,461	13.51	792,241,327	6.76	11,797,349,073	100.00
1953	5,750,463,000	47.96	3,590,122,000	29.94	1,823,301,000	15.21	826,422,000	6.89	11,990,308,000	100.00
1952	3,853,309,000	44.38	2,715,673,000	31.23	1,454,591,000	16.73	666,334,000	7.66	8,694,907,000	100.00

*—Calculated on the basis of new registrations of American made cars only, in conjunction with the advertised delivered price at factory of four-door sedan or equivalent model.

New Truck Registrations, by Makes and G.V.W., 1957-1958*

Make	Year	6,000 lb. or Less	6,001-10,000 lb.	10,001-14,000 lb.	14,001-16,000 lb.	16,001-19,500 lb.	19,501 26,000 lb.	26,001-33,000 lb.	33,001 lb. and over	Total
BROCKWAY	1958	.....	.....	.....	.....	.....	49	305	605	959
	1957	.....	.....	.....	.....	6	64	270	398	738
CHEVROLET	1958	147,106	40,210	8,719	42,803	7,021	.....	.....	.....	245,859
	1957	174,074	46,958	10,904	52,391	6,633	.....	.....	.....	290,960
DIAMOND T	1958	.....	.....	.....	.....	137	845	1,644	300	2,926
	1957	.....	.....	.....	.....	182	1,340	1,579	370	3,472
DIVCO	1958	116	1,380	604	.....	57	.....	.....	.....	2,157
	1957	7	1,752	724	.....	75	.....	.....	.....	2,558
DODGE	1958	18,968	6,896	17	2,491	4,980	2,344	896	194	36,786
	1957	23,386	11,160	489	3,510	6,242	3,981	507	156	49,431
FORD	1958	117,418	31,323	.....	7,850	35,930	11,312	1,558	1,871	207,262
	1957	163,708	40,137	9,495	45,194	9,136	5,646	1,964	2,021	277,301
F.W.D.	1958	.....	.....	.....	2	10	50	200	119	381
	1957	.....	.....	.....	22	35	83	192	101	433
G.M.C.	1958	20,925	8,275	126	6,562	8,706	6,738	3,030	1,071	55,433
	1957	21,966	9,325	2,426	6,690	9,313	7,375	4,165	905	62,165
INTERNATIONAL	1958	26,451	12,167	3,580	4,176	17,061	11,597	8,643	5,358	89,033
	1957	27,721	14,270	3,753	4,954	16,270	13,971	10,248	5,769	96,956
KENWORTH	1958	.....	.....	.....	.....	.....	.....	.....	813	813
	1957	.....	.....	.....	.....	.....	.....	119	887	1,006
MACK	1958	.....	.....	.....	.....	.....	1,058	3,535	7,217	11,810
	1957	.....	.....	.....	.....	134	1,146	4,920	7,112	13,312
PETERBILT	1958	.....	.....	.....	.....	.....	.....	78	315	393
	1957	.....	.....	.....	.....	.....	.....	194	303	497
STUDEBAKER	1958	2,762	610	161	11	525	.....	.....	.....	4,069
	1957	4,277	1,174	237	398	459	2	.....	.....	6,547
WHITE†	1958	.....	.....	.....	.....	.....	923	8,598	2,556	12,077
	1957	.....	.....	.....	66	436	1,228	9,463	3,365	14,558
WILLYS JEEP	1958	7,650	.....	.....	.....	.....	.....	.....	.....	7,650
	1957	6,678	.....	.....	.....	.....	.....	.....	.....	6,678
WILLYS TRUCK	1958	12,283	2,245	.....	.....	.....	.....	.....	.....	14,528
	1957	14,247	1,080	.....	.....	.....	.....	.....	.....	15,327
ALL OTHERS	1958	28,035	.....	.....	.....	33	105	171	478	28,822
	1957	15,262	.....	.....	.....	13	181	334	356	16,146
TOTAL	1958	381,714	103,106	13,207	63,895	74,460	35,021	28,658	20,897	720,958
	1957	451,326	125,856	28,028	113,226	48,934	35,017	33,955	21,743	858,085
% OF TOTAL	1958	52.95%	14.30%	1.83%	8.86%	10.33%	4.86%	3.97%	2.90%	100.00%
	1957	52.60%	14.67%	3.27%	13.19%	5.70%	4.08%	3.96%	2.53%	100.00%

*—Data for the year 1958 do not include returns from Oregon for the last six months during which time 4,845 new trucks were registered in that state. †—Includes Autocar and Reo.

U. S. Motor Vehicle Registrations, 1900-1958

These data do not include publicly owned vehicles of which there were approximately 826,000 in 1957.

Year	PASSENGER CARS Units	PASSENGER CARS Per Cent of Total	PASSENGER CARS Per Cent Increase	TRUCKS AND BUSES Units	TRUCKS AND BUSES Per Cent of Total	TRUCKS AND BUSES Per Cent Increase	TOTAL VEHICLES Units	TOTAL VEHICLES Per Cent Increase
1900	8,000	....	150	....	....	....	8,000	150
1901	14,800	....	85	....	....	....	14,800	85
1902	23,000	....	55	....	....	....	23,000	55
1903	32,920	....	43	....	....	....	32,920	43
1904	54,590	98.7	66	700	1.3	100	55,290	68
1905	77,400	98.2	42	1,400	1.8	100	78,800	43
1906	105,900	98.0	37	2,200	2.0	57	108,100	37
1907	140,300	98.0	33	2,900	2.0	32	143,200	32
1908	194,400	98.0	38	4,000	2.0	38	198,400	38
1909	305,950	98.1	57	6,050	1.9	51	312,000	57
1910	458,377	97.8	50	10,123	2.2	65	468,500	50
1911	618,727	96.8	35	20,773	3.2	105	639,500	36
1912	901,596	95.5	46	42,404	4.5	104	944,000	48
1913	1,190,393	94.6	32	67,667	5.4	60	1,258,060	33
1914	1,664,003	94.4	36	99,015	5.6	46	1,763,018	40
1915	2,332,426	93.6	42	158,506	6.4	60	2,490,932	41
1916	3,367,889	93.1	43	250,048	6.9	58	3,617,937	45
1917	4,727,468	92.4	42	391,057	7.6	56	5,118,525	41
1918	5,554,952	90.2	21	605,496	9.8	55	6,160,448	20
1919	6,679,133	88.2	21	897,755	11.8	48	7,576,888	23
1920	8,131,522	88.0	22	1,107,639	12.0	23	9,239,161	22
1921	9,212,158	87.8	14	1,281,508	12.2	16	10,493,666	11
1922	10,704,076	87.2	16	1,569,523	12.8	22	12,273,599	17
1923	13,253,019	87.8	24	1,849,086	12.2	18	15,102,105	23
1924	15,436,102	87.6	15	2,176,838	12.4	18	17,612,940	17
1925	17,439,701	87.5	13	2,501,023	12.5	15	19,940,724	13
1926	19,220,885	87.3	10	2,831,674	12.7	13	22,052,559	11
1927	20,142,120	87.2	5	2,997,439	12.8	6	23,139,559	5
1928	21,308,159	87.1	6	3,203,524	12.9	7	24,511,683	6
1929	23,060,421	87.1	8	3,442,087	12.9	7	26,502,508	8
1930	22,972,745	86.7	—0.4	3,559,254	13.3	3.4	26,531,999	0.1
1931	22,420,629	86.3	—2.4	3,573,267	13.7	0.4	25,993,896	—2.0
1932	20,994,092	86.2	—6.4	3,347,730	13.8	—6.3	24,341,822	—6.4
1933	20,557,493	86.2	—2.1	3,292,439	13.8	—1.7	23,849,932	—2.0
1934	21,535,199	86.6	4.7	3,346,268	13.4	1.6	24,881,467	4.3
1935	22,513,715	86.1	4.5	3,644,997	13.9	8.9	26,158,712	5.1
1936	24,044,432	85.6	6.8	4,047,277	14.4	11.0	28,091,709	7.4
1937	25,356,786	85.5	5.5	4,292,484	14.5	6.1	29,649,270	5.5
1938	25,264,589	85.5	—0.4	4,283,395	14.5	—0.2	29,547,984	—0.3
1939	26,147,798	85.3	3.5	4,496,770	14.7	5.0	30,644,568	3.7
1940	27,240,475	85.3	4.2	4,683,376	14.7	4.1	31,923,851	4.2
1941	29,240,417	85.6	7.3	4,911,990	14.4	4.9	34,152,407	7.0
1942	27,683,529	85.4	—5.3	4,741,298	14.6	—3.5	32,424,827	—5.1
1943	25,841,215	84.7	—6.7	4,657,882	15.3	—1.8	30,499,097	—6.0
1944	25,298,639	84.6	—2.1	4,611,966	15.4	—1.0	29,910,605	—1.9
1945	25,398,824	83.5	0.4	5,025,233	16.5	9.0	30,424,057	1.7
1946	27,834,543	83.6	9.6	5,858,813	17.4	16.6	33,693,356	10.7
1947	30,482,007	81.8	9.6	6,754,256	18.2	15.4	37,236,263	10.6
1948	33,011,780	81.5	8.3	7,490,343	18.5	11.0	40,502,123	8.9
1949	36,235,930	82.3	9.8	7,770,852	17.7	3.7	44,006,782	8.6
1950	39,952,969	82.8	10.2	8,318,721	17.2	7.0	48,271,690	9.7
1951	42,123,278	82.7	5.4	8,834,741	17.3	6.2	50,958,019	5.6
1952	43,323,355	82.6	2.8	9,131,021	17.4	3.4	52,454,376	2.9
1953	46,251,460	83.2	6.8	9,343,274	16.8	2.3	55,594,734	6.0
1954	48,174,447	83.0	4.2	9,875,683	17.0	5.7	58,050,130	4.4
1955	51,923,136	83.7	7.8	10,116,373	16.3	2.4	62,039,509	6.9
1956	54,066,619	83.8	4.1	10,428,106	16.2	3.1	64,494,725	4.0
1957	55,887,576	83.9	3.4	10,755,204	16.1	3.1	66,642,780	3.3
1958	56,892,359	84.0	1.8	10,867,504	16.0	1.0	67,759,863	1.7

—Denotes decrease. Sources: Public Roads Administration through 1930; 1931 to 1958 Automotive Industries count.

• TOTAL REGISTRATIONS •

Total U. S. Motor Vehicle Registrations by Regions, 1955-1958

Zone	Region	1958 Units	1958 % of Total	1957 Units	1957 % of Total	1956 Units	1956 % of Total	1955 Units	1955 % of Total
1	New England	3,731,296	5.51	3,686,049	5.53	3,555,547	5.51	3,428,877	5.53
2	Middle Atlantic	11,194,274	16.52	10,919,618	16.39	10,827,636	16.79	10,489,428	16.91
3	South Atlantic	9,042,568	13.34	8,930,927	13.40	8,423,538	13.06	8,028,473	12.94
4	East North Central	13,836,743	20.42	13,817,698	20.73	13,582,410	21.06	12,974,048	20.91
5	East South Central	4,043,651	5.97	3,980,206	5.97	3,856,392	5.98	3,694,606	5.96
6	West North Central	6,710,376	9.90	6,804,665	10.21	6,442,680	9.99	6,307,469	10.17
7	West South Central	6,869,523	10.14	6,761,359	10.15	6,527,125	10.12	6,333,989	10.21
8	Mountain	3,103,628	4.58	3,006,428	4.51	2,869,678	4.45	2,745,915	4.43
9	Pacific	9,227,804	13.62	8,735,830	13.11	8,409,719	13.04	8,036,704	12.94
	Total—Less Alaska	**67,759,863**	**100.00**	**66,642,780**	**100.00**	**64,494,725**	**100.00**	**62,039,509**	**100.00**
	Alaska	64,800	......	63,600	......	....	......	....	......
	Total—United States	**67,824,663**	......	**66,706,380**	......	....	......	....	......

States in the various regions are: Zone 1: Conn., Me., Mass., N. H., R. I., Vt.—Zone 2: N. J., N. Y., Pa.—Zone 3: Del., D. of C., Fla., Ga., Md., N. C., S. C., Va., W. Va.—Zone 4: Ill., Ind., Mich., Ohio, Wis.—Zone 5: Ala., Ky., Miss., Tenn.—Zone 6: Iowa, Kan., Minn., Mo., Neb., N. D., S. D.—Zone 7: Ark., La., Okla., Tex.—Zone 8: Ariz., Colo., Ida., Mont., Nev., N. M., Utah, Wyo.—Zone 9: Cal., Ore., Wash.

1958 U. S. Motor Vehicle Registrations, by States

As of the End of the Registration Year

These data do not include publicly owned vehicles of which there were approximately 826,000 in 1957

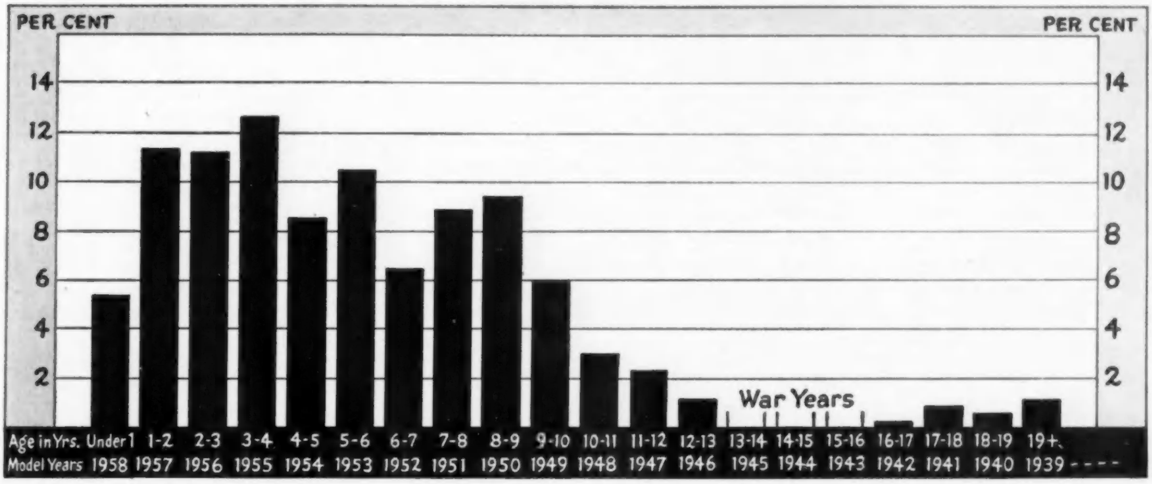
State	Passenger Cars	Trucks	Buses	Total Motor Vehicles	Taxicabs	Motorcycles	Trailers—Semi-Trailers: Tourist	Trailers—Semi-Trailers: Commercial	Trailers—Semi-Trailers: Total
Alabama	887,819	199,050	1,219	1,088,088	2,133	8,946	.....	19,164	19,164
Alaska	48,000	16,800	(2)	64,800	.....	.....	.....	.....	.....
Arizona	405,498	105,533	988	512,019	192	7,092	41,749	10,947	52,696
Arkansas	447,434	185,007	3,984	636,425	544	3,880	.....	.....	42,765
California	6,210,442	924,270	(2)	7,134,712	(3)	62,413	.....	676,678	676,678
Colorado	650,315	184,219	(3)	834,534	(3)	8,840	.....	58,400	58,400
Connecticut	892,745	109,248	3,317	1,005,310	677	5,275	28,311	11,961	40,272
Delaware	124,323	38,620	(2)	162,943	(3)	709	.....	10,910	10,910
Dist. of Col.	172,000	17,000	1,920	190,920	9,600	572	.....	1,421	1,421
Florida	1,771,709	276,662	3,325	2,051,696	30,780	25,941	197,434	31,375	228,809
Georgia	1,076,049	251,928	2,711	1,330,688	.....	8,532	1,910	52,647	54,557
Idaho	240,000	90,000	400	330,400	.....	2,500	33,400	400	33,800
Illinois	3,103,900	415,800	1,650	3,521,350	8,600	31,800	.....	.....	132,500
Indiana	1,563,713	322,236	7,612	1,893,561	(3)	17,162	7,241	144,437	151,678
Iowa	1,001,429	222,850	(2)	1,224,279	(3)	9,839	.....	.....	125,309
Kansas	840,988	264,036	(2)	1,105,024	(3)	9,397	.....	.....	33,494
Kentucky	888,800	220,300	1,350	1,110,450	1,900	6,000	6,600	7,000	13,600
Louisiana	872,380	208,724	4,484	1,085,588	2,642	8,196	41,722	22,180	63,902
Maine	283,141	70,539	270	353,950	794	1,607	.....	.....	35,938
Maryland	903,800	132,000	6,055	1,041,855	2,570	4,100	.....	30,706	30,706
Massachusetts	1,497,852	175,120	5,919	1,678,891	.....	6,266	.....	.....	96,392
Michigan	2,699,914	381,520	......	3,081,434	.....	34,146	22,900	313,185	536,085
Minnesota	1,204,823	249,567	4,739	1,459,129	.....	10,446	111,835	40,421	152,256
Mississippi	466,992	169,762	6,059	642,813	1,412	2,500	12,393	10,285	22,678
Missouri	1,280,000	315,400	4,400	1,599,800	.....	8,000	64,000	36,000	100,000
Montana	244,775	98,731	(2)	343,506	(3)	1,829	16,598	13,615	30,213
Nebraska	505,500	158,000	1,600	665,100	475	4,500	3,000	11,150	14,150
Nevada	112,912	35,057	(2)	147,969	(3)	1,933	.....	14,643	14,643
New Hampshire	188,900	36,318	(2)	225,218	(3)	1,647	.....	.....	17,711
New Jersey	1,944,896	262,408	5,139	2,212,443	4,358	11,033	.....	52,492	52,492
New Mexico	290,000	95,000	1,600	386,600	195	4,711	.....	.....	19,826
New York	4,366,840	515,571	19,720	4,902,131	27,802	16,618	.....	.....	155,930
North Carolina	1,228,403	280,780	1,578	1,510,761	3,062	4,994	86,633	24,505	111,138
North Dakota	220,255	104,702	57	325,014	(3)	961	4,027	1,375	5,402
Ohio	3,410,000	420,000	13,000	3,843,000	(3)	30,000	15,000	223,000	238,000
Oklahoma	826,350	263,000	860	1,090,210	1,350	12,000	7,600	16,350	23,950
Oregon	760,090	68,385	1,289	829,764	(3)	6,423	19,561	13,407	34,889
Pennsylvania	3,439,100	625,000	15,600	4,079,700	4,700	25,500	4,500	110,000	114,500
Rhode Island	284,823	37,648	866	323,337	1,864	1,538	.....	.....	15,833
South Carolina	663,002	137,969	6,677	807,648	1,720	6,233	2,351	11,289	13,640
South Dakota	244,256	87,521	253	332,030	(3)	1,968	.....	.....	37,999
Tennessee	982,300	218,000	2,000	1,202,300	2,300	7,600	6,500	(2)	6,500
Texas	3,250,000	803,300	4,000	4,057,300	.....	40,000	27,000	265,000	292,000
Utah	300,000	70,000	400	370,400	.....	1,000	.....	.....	9,000
Vermont	129,500	15,000	90	144,590	(3)	1,100	.....	.....	11,000
Virginia	1,135,959	220,978	2,426	1,359,363	3,772	9,934	38,948	23,707	62,655
Washington	1,040,100	220,990	2,238	1,263,328	9,021	6,081	92,481	20,742	113,223
West Virginia	465,294	120,577	823	586,694	849	2,770	13,192	2,855	16,047
Wisconsin	1,249,438	243,470	4,490	1,497,398	(3)	10,552	8,695	19,298	27,993
Wyoming	123,600	54,000	600	178,200	.....	1,033	7,500	14,000	21,500
Total	**56,892,359**	**10,721,796**	**145,708**	**67,759,863**	**123,292**	**487,171**	**1,023,081**	**2,315,545**	**3,974,841**
Alaska	48,000	16,800	......	64,800	.....	.....	.....	.....	.....
Total	**56,940,359**	**10,738,596**	......	**67,824,663**	.....	.....	.....	.....	.....

(1)—Includes taxicabs. (2)—Included with trucks. (3)—Included with passenger cars. (4)—Included with passenger cars but shown separately for convenience of our readers. (5)—Includes light 2-wheel trailers. (6)—Included with buses.

Note: In the above tabulation we have endeavored to make as accurate a count as existing conditions permit. This census is compiled from material secured direct from the state motor vehicle commissioners. Wherever possible, duplications occasioned by transfers and non-resident registrations have been eliminated. Data are for the registration year, even though this necessitates partial estimates, in the case of those states whose registration year ends February or March of the following year.

For Car and Truck Registrations in the 115 Leading Counties, see page 97

63% OF CARS IN USE ARE 3 TO 9 YEARS OLD



Number and Per Cent of Cars in Use, by Age Groups*

	1958			1957			1956			1955		
		% of Total			% of Total			% of Total			% of Total	
Age in Years	Units	Simple	Cumul.	Units	Simple	Cumul.	Units	Simple	Cumul.	Units	Simple	Cumul.
Under 1	2,797,573	5.34	5.34	3,606,605	7.03	7.03	3,963,476	7.97	7.97	4,135,548	8.78	8.78
1-2	5,944,835	11.35	16.69	5,916,162	11.53	18.56	6,700,917	13.48	21.45	4,859,042	9.72	18.50
2-3	5,889,545	11.25	27.94	6,699,679	13.05	31.61	4,582,918	9.22	30.67	5,723,459	12.15	30.65
3-4	6,642,010	12.68	40.62	4,576,684	8.92	40.53	5,700,487	11.47	42.14	3,674,973	7.80	38.45
4-5	4,497,661	8.59	49.21	5,652,209	11.01	51.54	3,638,120	7.32	49.46	5,386,532	11.43	49.88
5-6	5,514,941	10.53	59.74	3,575,240	6.97	58.51	5,290,075	10.64	60.10	6,102,453	12.95	62.83
6-7	3,414,684	6.52	66.26	5,072,314	9.88	68.39	5,913,977	11.90	72.00	4,772,516	10.13	72.96
7-8	4,667,882	8.91	75.17	5,538,667	10.79	79.18	4,434,174	8.92	80.92	2,765,944	5.87	78.83
8-9	4,921,108	9.40	84.57	3,870,956	7.54	86.72	2,466,246	4.96	85.88	2,607,579	5.53	84.36
9-10	3,178,110	6.07	90.64	2,020,999	3.94	90.66	2,162,001	4.35	90.23	1,623,817	3.45	87.81
10-11	1,577,542	3.01	93.65	1,637,011	3.19	93.85	1,277,475	2.57	92.80	......	....	....
11-12	1,184,066	2.26	95.91	890,116	1.73	95.58	......	....	....	......	....	....
12-13	612,836	1.17	97.08	......	....	....	......	....	....	......	....	....
13-14	......	....	....	......	....	....	......	....	....	463,973	.98	88.79
14-15	......	....	....	......	....	....	294,056	.59	93.39	1,781,923	3.78	92.57
15-16	......	....	....	184,519	.36	95.94	1,126,528	2.27	95.66	1,204,688	2.56	95.13
16-17	125,662	.25	97.33	698,539	1.36	97.30	755,465	1.52	97.18	692,726	1.47	96.60
17-18	454,704	.87	98.20	475,853	.93	98.23	419,680	.84	98.02	343,653	.73	97.33
18-19	316,141	.61	98.81	260,686	.51	98.74	206,417	.42	98.44	481,076	1.02	98.35
19 and older	623,801	1.19	....	646,193	1.26	....	774,202	1.56	....	773,168	1.65	....
Total	**52,363,101**	**100.00**	**100.00**	**51,322,932**	**100.00**	**100.00**	**49,706,214**	**100.00**	**100.00**	**47,122,890**	**100.00**	**100.00**
Age not known	129,408	....	....	109,528	....	....	97,763	....	....	255,080	....	....
Total in use	**52,492,509**	....	....	**51,432,460**	....	....	**49,803,977**	....	....	**47,377,970**	....	....
Average age of known models	**5.61 yrs.**			**5.51 yrs.**			**5.55 yrs.**			**5.85 yrs.**		

*—Based on data from The Reuben H. Donnelley Corp. as of July 1 of each year.

Number and Per Cent of Trucks in Use, by Age Groups*

	1958			1957			1956			1955		
		% of Total			% of Total			% of Total			% of Total	
Age in Years	Units	Simple	Cumul.	Units	Simple	Cumul.	Units	Simple	Cumul.	Units	Simple	Cumul.
Under 1	395,829	3.95	3.95	406,138	4.18	4.18	488,692	5.14	5.14	501,841	5.51	5.51
1-2	742,912	7.41	11.36	840,858	8.66	12.84	923,404	9.71	14.85	689,919	7.57	13.08
2-3	848,399	8.46	19.82	918,848	9.46	22.30	688,828	7.24	22.09	846,981	9.30	22.38
3-4	914,163	9.12	28.94	675,750	6.96	29.26	843,657	8.87	30.96	776,276	8.52	30.90
4-5	669,355	6.68	35.62	819,688	8.44	37.70	763,474	8.03	38.99	953,787	10.47	41.37
5-6	811,948	8.10	43.72	738,951	7.61	45.31	933,160	9.81	48.80	1,036,818	11.38	52.75
6-7	723,909	7.22	50.94	899,406	9.26	54.57	1,011,260	10.64	59.44	862,071	9.46	62.21
7-8	878,368	8.76	59.70	969,071	9.98	64.55	831,542	8.75	68.19	831,940	9.13	71.34
8-9	936,031	9.33	69.03	787,591	8.11	72.66	789,457	8.30	76.49	624,674	6.86	78.20
9-10	750,521	7.49	76.52	727,784	7.48	80.14	576,708	6.07	82.56	551,858	6.06	84.26
10-11	679,820	6.78	83.30	516,350	5.32	85.46	501,353	5.27	87.83	107,019	1.17	85.43
11-12	467,943	4.67	87.97	446,414	4.60	90.06	96,535	1.02	88.85	42,815	.47	85.90
12-13	397,158	3.96	91.93	85,327	.88	90.94	38,548	.41	89.26	14,821	.16	86.06
13-14	75,483	.75	92.68	33,135	.34	91.28	14,041	.15	89.41	148,315	1.63	87.69
14-15	29,235	.29	92.97	13,111	.13	91.41	130,361	1.37	90.78	304,021	3.34	91.03
15-16	12,377	.12	93.09	111,786	1.15	92.56	253,298	2.66	93.44	202,159	2.22	93.25
16-17	97,320	.97	94.06	213,678	2.20	94.76	164,086	1.73	95.17	141,254	1.55	94.80
17-18	181,068	1.81	95.87	135,968	1.40	96.16	111,956	1.18	96.35	88,925	.97	95.77
18-19	113,804	1.13	97.00	91,321	.94	97.10	69,447	.73	97.08	125,032	1.37	97.14
19 and older	300,934	3.00	....	281,689	2.90	....	278,134	2.92	....	260,754	2.86	....
Total	**10,026,577**	**100.00**	**100.00**	**9,712,864**	**100.00**	**100.00**	**9,507,941**	**100.00**	**100.00**	**9,111,280**	**100.00**	**100.00**
Age not known	29,990	....	....	63,086	....	....	36,141	....	....	51,164	....	....
Total in use	**10,056,567**	....	....	**9,775,950**	....	....	**9,544,082**	....	....	**9,162,444**	....	....
Average age of known models	**7.22 yrs.**			**6.97 yrs.**			**6.74 yrs.**			**6.71 yrs.**		

*—Based on data from The Reuben H. Donnelley Corp. as of July 1 of each year.

• TOTAL REGISTRATIONS •

CARS IN USE BY MAKES,

Model Yr.	Ala.	Ariz.	Ark.	Calif.	Colo.	Conn.	Del.	D. C.	Fla.	Ga.	Idaho	Ill.	Ind.	Iowa	Kan.	Ky.	La.	Me.	Md.	Mass.	Mich.	Minn.	Miss.	Mo.	Mont.
BUICK																									
'58	2715	818	1035	11868	1442	2161	457	467	5242	3277	739	13854	5850	2578	2796	2536	2761	534	2258	4146	11787	4519	1473	2505	756
'57	6234	2179	2518	29190	3365	5170	1139	1275	12479	6345	1619	28698	13772	6263	5132	5334	5884	1601	5023	8966	22949	8033	3019	7168	1511
'56	7743	3121	3010	52215	4577	8016	1504	2050	17006	8562	2046	37008	17197	7370	6528	6931	7665	2110	8107	13810	32012	9658	3849	9383	1824
'55	8934	4295	3642	81060	5938	9886	1818	2875	20437	9927	2357	48327	22959	9108	8138	8870	8226	2397	9486	17814	46816	11314	4161	12654	1912
'54	5321	2389	2007	39618	4053	6666	967	1553	12432	5601	1454	31215	14028	6463	5544	5424	4993	1699	6710	11822	24835	7962	2462	7428	1406
'53	7093	2905	2650	38031	4603	6938	1045	1606	13351	7463	1697	32091	14039	6598	5891	6517	6013	1983	6111	12667	23813	9448	3037	8414	1514
'52	3847	1650	1562	25286	3290	4073	570	939	7963	4412	1251	18097	8177	3962	3799	3907	3410	1262	3620	7468	12990	5502	2002	5115	1073
'51	5010	2267	1922	33561	4225	5256	744	1131	9205	5463	1449	21232	9779	5606	4635	5315	3917	1683	4334	9432	13768	7006	2524	6440	1354
'50	8001	3495	2821	53913	6917	7997	1029	1700	14003	7860	2221	27970	13259	8901	6830	8251	6084	2403	5837	13416	17457	10712	3749	9671	1937
'49	2220	1309	857	21732	2195	3443	377	771	4702	2060	852	9528	4564	3235	2327	3029	1977	974	2686	6017	5367	3323	1226	3458	617
'48	1000	675	428	12304	1145	1883	215	349	2277	1133	488	4162	2290	1636	1154	1404	842	570	1450	2972	3109	1828	548	1783	332
'47	814	606	343	9779	1042	1491	141	215	1689	812	415	3106	1756	1214	933	1169	674	510	977	2418	1902	1418	499	1427	315
'46	355	260	130	4353	451	589	50	103	742	360	169	1189	681	528	402	439	308	207	329	907	735	547	191	578	125
'45-'42	72	71	25	950	93	100	7	15	117	81	45	234	150	107	69	79	70	33	87	117	134	88	36	90	29
'41	320	298	132	5979	527	767	30	91	708	355	213	1084	597	536	467	378	236	169	368	939	637	609	195	540	140
'40	248	199	99	4339	326	681	40	82	605	257	146	853	463	416	318	292	166	254	344	956	554	519	117	429	127
Before '40	270	291	109	6582	613	1065	48	108	690	296	176	1240	680	683	448	348	169	321	546	1102	909	847	165	549	185
Unid.*	40	9	21	32	25	42	74	13	335	200	8	585	98	86	81	69	82	8	127	77	477	30	62	3	13
Total	60237	26837	23311	430772	44828	66324	10255	15352	123983	64464	17325	280473	130339	65290	55537	60292	53477	18738	58400	115046	220251	83363	29315	77635	15170
CADILLAC																									
'58	784	458	385	9532	625	1498	255	471	3870	1205	343	6350	2090	717	871	651	1012	179	831	1917	5498	1315	432	1003	286
'57	1380	1009	724	17776	1222	2115	424	711	6852	1919	483	10817	3247	1429	1389	1094	1803	457	1742	3188	7808	1956	690	2340	491
'56	1492	1141	649	20000	1406	2406	388	801	7310	2133	525	10596	3499	1431	1358	1264	1888	455	1799	3510	6529	2059	733	2280	491
'55	1301	1027	594	19552	1424	2314	316	644	6442	1757	432	9337	3048	1369	1270	1080	1503	409	1547	3453	5144	1855	675	2074	431
'54	958	723	336	14858	1028	1634	219	422	4427	1126	323	5777	1975	861	820	754	969	280	1178	2553	2993	1296	341	1330	285
'53	1151	845	391	15518	1255	1913	233	452	4589	1385	420	6372	2285	1032	901	907	1101	306	1085	2914	3412	1282	431	1484	342
'52	981	809	326	14300	1092	1549	180	337	3712	1185	348	4656	1714	808	724	851	834	268	882	2250	2345	1101	343	1061	281
'51	1288	867	407	17044	1216	1911	184	389	4197	1514	386	4972	1885	917	807	977	1045	327	951	2828	2448	1292	455	1325	304
'50	1130	787	368	18853	1234	1779	154	361	3838	1234	323	4372	1604	917	762	937	992	352	939	2714	1879	1153	436	1184	257
'49	979	683	330	14100	1037	1590	156	322	3384	1135	251	3340	1473	713	638	913	819	338	819	2280	1578	993	361	1078	220
'48	419	326	132	6800	438	922	78	166	1595	498	124	1665	719	352	243	456	365	180	480	1207	764	453	194	525	83
'47	363	330	108	5767	425	842	72	173	1371	428	106	1304	676	318	203	378	217	178	407	1185	709	415	156	422	84
'46	121	149	38	2459	163	335	18	61	554	147	38	431	233	96	85	168	84	61	163	426	197	144	38	169	22
'45-'42	30	36	6	738	51	81	4	12	99	43	13	121	40	23	26	31	33	12	23	113	52	44	14	54	12
'41	124	158	40	3446	244	427	21	51	444	156	49	377	213	111	95	143	88	87	153	505	235	169	55	209	39
'40	35	51	16	1128	78	210	7	17	183	47	21	143	76	35	20	55	31	35	63	205	88	85	16	76	12
Before '40	47	106	27	2061	147	328	19	30	171	79	24	215	108	83	54	60	35	56	74	282	185	101	22	92	37
Unid.*	5	8	3	24	9	30	17	5	155	65	2	161	27	24	15	16	23	1	75	15	101	4	8	1	
Total	12588	9513	4880	183956	13094	21884	2745	5425	53193	16056	4211	71006	24912	11236	10281	10735	12842	3981	13211	31545	41965	15717	5400	16707	3677
CHEVROLET																									
'58	12068	5475	5171	72893	8825	11017	2762	3689	28974	16284	3002	55717	21219	12881	12928	10502	16317	2464	13232	19022	48149	19712	6426	13950	2813
'57	26070	9465	12407	121815	14715	18765	4738	4992	47438	28789	4698	95424	40150	24303	21634	20896	31857	6517	23027	32133	76433	29475	14259	37205	5681
'56	29106	9792	13770	133780	15629	20158	4314	6312	47028	33868	5223	94446	43159	22032	21247	23611	29537	7184	25368	32876	85832	28349	15005	34861	5675
'55	29906	11243	14611	139786	18935	20959	4666	5953	51553	34349	5914	99313	50286	29227	25291	24812	30730	8186	24092	40886	98718	31126	15509	40270	7099
'54	21059	6515	10144	82434	12087	15495	3283	4053	31327	23696	3519	68522	30321	21755	17282	17283	24036	5963	19918	30701	54458	23740	11517	28760	4306
'53	24054	8115	11900	102893	13782	17848	3704	3850	31181	27031	4788	72440	38357	23869	18254	22635	22921	7371	20038	33877	67195	28270	12194	31526	5148
'52	15581	5057	7511	64882	8546	10565	1977	2352	17820	17154	3208	39162	22171	14229	12090	14526	13519	4684	12904	19836	35023	16962	8438	20011	3372
'51	22143	7256	10341	97437	13005	16060	2457	2839	24347	25400	4486	54055	31483	22258	18428	22606	17200	6636	15847	29614	45588	25129	11444	29909	4857
'50	25756	7892	11511	109530	14689	16290	2444	2438	26223	27310	5161	51132	32113	24306	20191	25773	18636	6431	16938	28330	43231	25939	12413	31431	5153
'49	17362	5546	7910	75182	9967	10358	1464	1383	15817	16537	4045	32121	21547	18489	14659	18937	11988	4239	10589	18647	23782	18348	8649	22334	3570
'48	11343	2901	4645	43669	6654	6069	793	704	8933	9112	2248	18916	12380	11555	10085	10917	6359	2581	6066	10041	13338	11526	5476	15234	2037
'47	8003	2543	3521	34555	5722	4330	524	416	6814	7215	1927	13418	9132	9694	8471	8312	4602	1806	3880	6844	8610	9402	3976	11619	1643
'46	3441	1208	1517	18912	2637	1961	173	157	3194	3211	969	5654	3891	4215	3817	3706	1872	861	1496	2853	3334	4489	1792	5315	773
'45-'42	692	382	325	6046	767	345	37	37	649	700	279	1137	812	1153	982	629	497	136	525	358	647	1061	319	1111	218
'41	3101	1668	1510	31280	3280	1761	127	143	2826	3059	1275	4394	2991	4478	4821	2961	1494	555	1256	2102	2395	4521	1419	5532	1016
'40	2072	910	958	16909	1972	1460	117	114	2022	2360	774	3188	2269	2922	2582	2024	1088	589	926	1630	2009	3192	1064	3724	643
Before '40	2505	1796	1367	30003	3899	2023	183	135	2462	3190	1362	5678	4062	6653	5504	2962	1581	959	1454	2082	4331	7357	1375	6484	1336
Unid.*	163	50	115	120	96	105	37	24	975	980	27	1583	294	595	267	320	439	26	599	242	1209	140	220	22	33
Total	254425	87814	119234	1182066	155227	175566	34110	39591	349583	280245	52905	716300	366637	254614	218533	233412	234673	67188	198155	312074	614282	289739	131495	339298	55373
CHRYSLER																									
'58	455	229	165	4564	451	912	178	341	1360	628	209	3252	1117	551	540	389	454	87	703	1178	2222	977	250	467	174
'57	1476	797	507	14250	1279	2508	425	640	4337	1526	491	9429	3808	1559	1407	1146	1620	385	2321	3737	7606	2430	683	2127	577
'56	1245	675	518	12610	1124	2562	313	629	3890	1339	516	8712	3451	1596	1197	943	1258	412	2171	3517	5218	1981	601	1577	563
'55	1639	996	657	13287	1833	3119	284	678	5017	1749	676	10482	4476	2290	1828	1314	1510	541	2004	4255	7811	2737	747	2392	650
'54	961	509	388	6603	1125	2158	192	483	3173	967	308	6796	2540	1384	1058	816	1079	345	1533	2854	4069	1919	516	1470	365
'53	1580	955	664	13067	1682	2880	314	679	4632	1646	551	9965	4274	2161	1654	1598	1543	711	2048	4684	6947	3022	932	2578	492
'52	979	624	359	9680	1117	1406	154	378	2529	940	423	4592	2176	1228	1107	890	869	341	1334	2182	2968	1678	524	1445	363
'51	1308	887	535	14941	1750	2120	223	525	3556	1253	490	6634	3066	1974	1504	1448	1212	510	1860	3269	4251	2807	710	2305	501
'50	1545	966	680	17837	1993	2598	237	623	4131	1638	582	7964	3655	2483	1885	1786	1351	666	1900	4227	4807	3485	855	2855	550
'49	1136	743	520	11809	1461	1881	165	414	2898	1103	449	5578	2684	2017	1594	1555	984	482	1389	3008	3124	2697	604	2322	459
'48	934	515	343	7756	998	1163	103	244	1746	950	325	3082	1553	1225	975	975	716	306	1009	1956	1787	1584	496	1338	287
'47	422	425	190	5623	660	737	67	133	1132	394	256	1669	997	856	688	591	361	198	444	1167	1005	1056	213	907	238
'46	203	219	122	3769	357	480	37	78	635	171	141	853	511	385	276	310	175	85	336	628	413	458	101	412	99
'45-'42	20	32	15	617	35	49	2	3	53	25	23	85	43	41	26	28	23	5	22	55	49	51	8	39	17
'41	112	218	58	4452	346	391	12	45	403	154	105	501	294	266	211	175	75	67	200	369	308	330	50	280	127
'40	77	88	32	1932	177	199	13	20	185	84	66	251	209	144	128	102	50	39	115	183	183	201	24	188	55
Before '40	75	133	31	2685	219	233	13	19	213	94	77	349	234	237	162	149	66	76	186	243	248	325	44	197	104
Unid.*	22	6	6	22	3	30	21	9	124	54	8	165	22	33	29	24	25	3	62	33	131	8	15	2	1
Total	14189	9017	5790	145304	16610	25426	2753	5941	40020	14715	5696	80359	35110	20430	16269	14238	13371	5258	19637	37545	53247	27746	7373	22901	5622
DE SOTO																									
'58	312	109	138	2449	254	479	95	175	785	344	126	1749	835	382	358	220	306	90	486	900	2013	742	128	379	98
'57	980	434	443	9044	787	1742	271	461	2945	982	375	6519	3395	1195	1196	912	1191	435	1540	3017	7660	2059	539	2139	343
'56	752	491	389	9133	774	1660	215	560	2949	963	374	6585	3225	1056	980	831	910	477	2014	2992	5621	1889	468	2053	295
'55	999	578	512	9465	1016	1613	230	645	3053	1119	421	6519	3989	1395	1171	983	1085	515	1762	3346	6081	2086	598	2398	356
'54	599	346	319	5207	589	1203	143	383	2239	734	229	4513	2331	928	753	640	744	382	1109	2586	3421	1420	359	1463	247
'53	1172	597	624	10482	1022	1960	214	461	3008	1231	412	7697	3810	1622	1257	1206	1413	609	1582	4152	6100	2438	602	2600	401
'52	781	508	448	7736	747	1215	146	254	1906	818	328	4639	2254	1082	915	769	937	366	1191	2610	2978	1624	411	1599	260
'51	820	460	445	8969	859	1459	139	289	2070	839	310	5219	2402	1327	1004	1039	941	421	1331	3131	3425	1830	419	1988	291
'50	1142	648	692	12397	1147	1897	193	377	2680	1164	438	6544	3071	1750	1301	1257	1313	518	1301	3787	4035	2488	587	2519	367
'49	799	495	400	10466	857	1479	153	271	1867	740	407	4471	2195	1230	987	983	637	357	1179	2876	2568	1542	324	1643	313
'48	608	382	193	7383	522	899	97	167	1265	758	269	2534	1130	722	578	598	433	247	746	1910	1563	817	309	1035	156
'47	235	327	109	5537	383	593	53	92	863	310	162	1443	720	487	374	386	227	164	419	1103	705	545	109	583	109
'46	143	187	59	3579	217	409	20	55	514	167	86	686	399	253	231	215	103	65	221	610	308	301	47	339	74
'45-'42	13	21	6	519	29	28	3	3	35	11	8	69	51	27	23	11	18	5	13	44	34	28	8	25	10
'41	88	105	31	2800	127	201	9	25	187	65	69	260	189	114	101	71	49	40	85	249	129	133	19	166	37
'40	54	62	14	1446	107	173	10	8	155	40	39	180	150	75	85	74	33	40	80	149	147	101	20	146	22
Before '40	52	107	26	2175	144	191	10	21	157	64	48	229	204	118	101	100	35	48	88	172	167	193	22	180	39
Unid.*	9	6	8	14	5	14	25	1	71	45	1	150	27	21	14	13	10	3	47	33	96	3	12		2
Total	9538	5863	4854	108801	9586	17215	2028	4248	26749	10394	4102	60006	30377	13784	11429	10308	10398	4780	15194	33867	47051	20239	4981	21255	3420

Unid.*—Unidentified as to model year. Data from the Reuben H. Donnelley Corp. are as of July 1, 1958.

For Summaries of Cars and Trucks in Use by Makes, by Model Year, see page 96

STATES AND MODEL YEAR

Make	Model Yr.	Neb.	Nev.	N.H.	N. J.	N.M.	N. Y.	N. C.	N.D.	Ohio	Okla.	Ore.	Pa.	R. I.	S. C.	S. D.	Tenn.	Tex.	Utah	Vt.	Va.	Wash.	W.Va.	Wis.	Wyo.	Totals
BUICK	'58	1304	138	253	6155	876	17340	3345	662	10494	1690	1393	11661	525	1622	695	2787	10849	796	365	3220	1436	1399	3903	371	171853
	'57	2850	628	995	13347	1547	34218	7135	1195	27496	4647	3324	24962	1190	3864	1156	6232	22483	1670	734	6727	4378	4202	10334	861	381041
	'56	3537	968	1402	21336	2005	47156	9324	1386	37598	5915	5430	36631	2057	4655	1436	8382	29489	2576	998	9317	7552	4449	13168	1025	531083
	'55	4770	1364	1782	27807	3004	60569	11769	1465	47836	8469	6069	45370	2802	5429	2075	10054	36879	3442	1022	11387	9769	5260	16506	1247	689642
	'54	3283	745	1289	14464	1675	37102	6640	1098	30121	5742	3548	26508	2139	3173	1605	6002	20960	2164	778	6575	5849	3239	10942	938	410631
	'53	3584	713	1265	15093	2000	38871	9167	1316	29894	5682	3701	29942	1974	3988	1470	7513	22663	2200	1026	7645	6011	4123	11850	993	438202
	'52	2288	513	778	9462	1247	23306	5019	904	16995	3462	2832	17526	1129	2471	1071	4251	13647	1479	580	4747	4513	2502	7009	682	263640
	'51	3204	664	1025	13165	1339	28452	6500	1088	20406	4115	3910	20943	1585	3009	1454	5527	15343	1917	735	5942	6328	3358	9434	853	327554
	'50	4716	1008	1379	20058	1930	40060	10220	1469	27334	6509	6071	29502	2502	4859	2032	8216	23360	3310	1058	8330	9928	5097	13158	1217	479757
	'49	1568	475	631	8864	538	15112	3084	513	10074	2393	2348	11365	1037	1543	712	2298	5642	1152	425	3024	4182	1945	4478	421	172670
	'48	801	283	286	4119	294	6539	1443	238	4801	1112	1338	5546	502	846	360	1160	2826	569	227	1585	2528	978	2135	220	86693
	'47	684	260	226	3421	205	4780	1228	225	3575	863	1333	4332	400	619	278	947	2134	537	162	1221	2299	795	1664	169	68022
	'46	305	84	92	1251	95	1738	517	117	1388	361	587	1713	156	242	137	379	883	215	73	492	1063	336	623	75	27650
	'45-'42	81	25	9	135	18	267	52	24	193	85	115	224	24	38	22	90	288	43	5	69	223	33	87	14	5063
	'41	313	137	97	1201	98	1536	496	99	1137	366	645	1666	147	305	115	344	872	228	52	438	1203	260	616	91	28777
	'40	245	96	134	1147	60	1533	357	71	969	249	402	1656	186	256	84	250	456	160	71	340	721	220	530	52	23075
	Before '40	381	135	161	1663	87	1937	355	112	1373	484	494	2169	220	256	148	267	668	196	134	425	990	233	836	119	32283
	Unid.*	30	5	142	81	26	386	21	.....	145	73	4	1553	16	8	9	161	243	.....	1	51	37	6	5	2	5603
	Total	33944	8241	11946	162769	17044	360902	76672	11982	271829	52217	43544	273269	18591	37183	14859	64860	209665	22654	8446	71535	69010	38435	107278	9350	4143239
CADILLAC	'58	411	136	116	3626	306	10081	1132	170	3789	636	601	4860	361	388	175	798	4060	305	133	1071	578	386	1232	136	78065
	'57	686	393	315	6323	537	14488	1854	291	7587	1586	1088	7989	666	860	294	1405	7177	522	163	1868	1269	825	2649	237	134138
	'56	666	447	331	6495	671	14261	2140	280	8084	1597	1304	8313	708	908	259	1544	7710	732	175	2082	1681	712	2508	277	140028
	'55	659	509	325	6100	579	12391	1890	231	7440	1620	1196	7363	772	755	316	1407	7367	717	153	1869	1796	635	2150	265	127503
	'54	392	337	200	4150	386	7621	1325	130	5102	1106	800	4862	534	568	185	1031	4758	545	114	1261	1417	415	1508	155	86368
	'53	488	401	257	4555	481	8507	1674	162	5648	1010	1027	5297	472	750	201	1208	4992	620	113	1412	1878	569	1845	202	95775
	'52	417	305	209	3668	420	6394	1399	147	4485	947	912	4348	418	674	206	1060	4002	654	98	1183	1608	512	1410	186	78599
	'51	448	415	234	4481	465	7380	1770	145	4988	1130	1005	4505	595	908	219	1353	4893	771	109	1382	1962	568	1726	216	91604
	'50	392	418	221	4029	409	6727	1549	102	4233	994	1013	4348	505	793	192	1084	4569	653	118	1220	2072	580	1586	167	86533
	'49	357	332	171	3363	302	5648	1386	123	3493	849	789	3707	429	828	163	853	3212	504	105	972	1601	483	1266	127	70593
	'48	142	151	92	1960	78	3052	558	43	1731	416	387	1874	221	301	53	436	1194	193	64	497	815	256	670	52	34420
	'47	157	172	89	1759	93	2593	496	37	1411	328	337	1755	213	263	42	360	939	144	54	448	691	209	516	82	29795
	'46	41	76	37	662	45	896	167	8	509	144	150	607	67	123	12	131	334	79	22	138	325	97	182	16	11268
	'45-'42	18	20	7	124	14	222	47	2	106	27	43	150	17	38	1	21	100	16	3	51	102	17	56	2	2915
	'41	51	86	32	576	38	805	182	8	459	160	178	718	90	105	13	111	334	86	16	185	384	52	162	20	12490
	'40	14	36	23	251	18	318	61	2	219	67	66	309	45	33	9	58	118	25	11	57	109	23	87	10	4702
	Before '40	41	48	31	373	25	435	74	11	267	87	93	406	56	60	11	54	146	48	24	68	203	41	80	11	7136
	Unid.*	4	3	39	35	0	139	5	1	43	11		555	6	1	3	48	80	.....	1	6	15	.....	2	2	1801
	Total	5384	4285	2727	52530	4875	101958	17709	1893	59594	12715	10989	61966	6175	8356	2354	12962	55985	6614	1476	15770	18506	6380	19635	2133	1093733
CHEVROLET	'58	7057	867	1801	25241	4092	62359	12420	3624	42160	8153	8174	46400	2280	6044	3539	12563	54245	2822	1841	13847	7376	4996	14443	1613	773449
	'57	11453	2372	4695	44341	7305	109898	26950	6168	82820	19739	14563	81075	4931	13480	5143	23955	101728	5107	2995	27966	19351	16438	31191	3022	1419572
	'56	11286	2405	4845	46332	7387	100516	31139	5121	88757	21774	15466	83453	5135	17740	4988	27162	102828	6262	3070	29033	20464	13835	31773	3215	1472149
	'55	12695	2548	5927	52475	8861	114646	36758	5850	93511	25465	17520	90599	7264	19906	5990	30328	114943	6612	3646	29904	23212	13414	32598	3582	1621674
	'54	11044	1371	4275	36277	5458	82437	25110	4315	58156	20272	9659	65837	5244	13839	5146	22074	76298	4272	2502	21076	14195	9435	23074	2349	1095889
	'53	12361	1747	4823	41471	6020	86383	34322	5527	75097	19254	11909	80349	6035	18622	5842	24225	76112	5754	3047	25404	18748	13150	28929	2776	1261145
	'52	8559	1073	2941	25376	3609	50584	20780	3355	44463	12273	8473	48009	3942	11434	3555	15206	44252	3894	1921	15824	12767	8596	17564	1726	761756
	'51	12147	1659	4062	37115	4949	69499	29590	5004	61238	17028	12616	66031	6035	17499	5522	22204	61708	5480	2593	22326	19596	12249	26742	2377	1086084
	'50	13390	1769	3956	37301	5408	66664	32259	4911	60063	20136	13887	65806	6244	20736	5848	24340	69213	6038	2275	23096	22676	13841	27471	2714	1141303
	'49	9433	1240	2512	25247	3594	38180	20631	3891	37528	13616	10252	42650	4297	14486	4280	17045	43892	4191	1389	15183	16740	10176	19327	1811	755082
	'48	6988	701	1432	13505	1942	18154	12371	2506	21401	8908	5957	23651	2274	9260	2870	10666	25483	2328	746	9299	9717	6333	11612	1162	442790
	'47	6132	549	874	9379	1647	10852	9403	2178	14395	6989	5165	15691	1691	7367	2725	8150	19831	1884	488	6582	8456	4489	8953	938	331787
	'46	2923	337	422	4193	759	4458	4368	1019	5692	3199	2875	6683	703	3221	1264	3372	8616	879	193	2877	4341	1934	4092	373	150241
	'45-'42	834	135	54	533	201	728	736	279	853	689	864	969	97	594	299	665	2499	252	32	479	1526	252	836	114	34364
	'41	3415	494	238	3091	783	2826	4031	1114	4113	3418	4407	5865	603	3804	1257	3317	9474	1086	144	2642	7033	1524	3823	527	158994
	'40	1834	298	257	2332	432	2356	2538	619	3319	2115	2276	4586	467	2609	753	2037	5338	638	161	1674	3654	1063	2661	291	101826
	Before '40	4220	603	534	3140	726	3193	3523	1311	6149	3841	3564	7159	659	3219	1537	2760	8312	1072	305	2758	6259	1716	5829	651	173783
	Unid.*	197	10	487	205	85	1051	15	7	424	254	14	5413	60	23	60	562	1242	.....	2	177	133	9	12	5	19438
	Total	135968	20178	44126	407554	63258	824784	306944	56799	700139	207123	147641	740226	57961	183883	60618	250632	826014	58571	27352	250147	216244	133450	290930	29246	12801326
CHRYSLER	'58	312	72	74	2913	247	6706	567	230	2380	242	283	3928	219	241	174	394	1974	196	84	788	334	327	691	77	45306
	'57	730	338	274	8405	589	18570	1830	562	9369	1011	1103	11283	657	716	347	1270	6300	690	203	2119	1590	1304	2641	211	139283
	'56	738	254	282	7519	494	16197	1908	424	8301	732	1039	10741	648	719	275	1165	4412	638	227	2276	1617	1134	2397	214	122969
	'55	1088	329	376	7328	646	16954	2535	486	9709	1197	1416	11383	806	800	438	1650	6200	783	315	2637	2303	1356	2973	346	147026
	'54	815	189	242	5739	410	13306	1224	325	5834	750	715	7091	508	499	359	954	3600	491	210	1665	1311	849	1740	204	92640
	'53	1287	348	309	7912	643	17978	2255	619	10219	1219	1361	11202	841	947	500	1642	5684	845	406	2606	2240	1444	2980	331	147077
	'52	786	244	188	3674	415	7427	1182	344	5188	886	1052	5456	410	513	300	863	3420	562	162	1413	1664	750	1681	258	79124
	'51	1280	344	250	5419	471	10397	1587	475	7588	1116	1620	8310	616	655	493	1272	4571	758	246	1995	2844	1131	2745	315	116137
	'50	1485	403	322	6469	533	12485	1878	578	8570	1501	1952	10009	860	762	543	1536	5318	884	263	2285	3441	1295	3479	356	138512
	'49	1191	242	214	5059	427	8381	1421	472	6224	1195	1366	7794	640	627	509	1169	3669	652	180	1720	2367	1115	2506	301	100317
	'48	791	196	150	3134	247	4586	813	272	3299	780	904	4415	372	463	317	791	2200	429	128	991	1613	691	1389	194	61531
	'47	614	163	66	1869	156	2545	491	189	2078	531	703	2852	196	290	205	469	1366	336	75	630	1284	481	890	97	39005
	'46	252	94	30	1128	65	1298	271	68	1048	253	474	1635	113	173	105	218	675	173	26	359	805	279	372	54	21222
	'45-'42	27	16	5	80	6	162	24	8	103	34	61	122	11	21	8	25	90	24	5	26	140	17	33	9	2422
	'41	142	91	29	666	74	711	195	46	650	163	494	1157	77	115	61	122	337	118	19	237	782	137	278	59	16309
	'40	94	45	18	367	26	445	124	16	320	93	224	727	46	63	37	83	191	51	21	104	323	85	142	22	8414
	Before '40	110	56	19	408	40	517	104	40	515	147	313	870	67	72	58	61	231	73	29	115	601	97	255	38	11146
	Unid.*	21	3	36	109	13	238	.....	.....	64	9	1	542	6	.....	3	29	143	1	3	24	10	1	1	.....	2115
	Total	11763	3427	2884	68198	5502	138903	18409	5156	81459	11859	15081	99517	7093	7676	4732	13713	50381	7704	2602	21990	25169	12493	27193	3084	1290555
DE SOTO	'58	125	53	46	1490	120	3920	459	129	1752	199	236	2611	108	160	115	427	1040	186	49	649	249	202	428	66	28769
	'57	375	248	280	6881	413	13285	1522	375	8316	921	1126	9522	490	670	282	1130	4269	611	126	1891	1261	968	2310	214	108090
	'56	479	194	271	6939	347	12134	1494	273	8044	863	1043	9498	296	638	223	1004	3191	651	160	1935	1252	912	2423	206	102126
	'55	656	200	358	5476	388	10943	1822	426	7976	1101	1382	8824	603	815	306	1321	3824	723	163	2075	1940	911	2315	256	106739
	'54	413	140	246	3769	207	8841	1030	311	5205	755	684	5488	367	465	210	816	2012	323	116	1380	1135	570	1531	140	69041
	'53	658	245	354	5291	397	13264	1971	367	8101	1150	1296	9752	627	865	379	1498	3759	697	185	1988	1864	910	2611	238	115139
	'52	517	155	205	3216	293	7596	1252	258	4761	956	944	5548	359	595	277	902	2808	429	139	1279	1512	540	1840	169	73074
	'51	607	169	244	3812	251	8255	1299	304	5422	1037	983	6313	476	566	344	994	2862	473	181	1327	1727	704	1989	146	81912
	'50	791	231	277	4674	331	10423	1651	393	6696	1233	1394	8319	655	758	417	1399	3589	637	203	1754	2498	815	2610	254	105815
	'49	491	158	226	3666	219	7040	1138	276	5018	798	1240	6282	500	547	259	916	2123	562	158	1348	1983	693	2060	169	77109
	'48	335	127	155	2148	133	3782	616	189	2832	553	729	3653	268	378	188	549	1240	336	102	820	1413	476	1163	111	47617
	'47	233	93	90	1479	96	2202	428	65	1725	319	651	2450	167	208	116	322	714	238	60	554	1170	267	776	63	30524
	'46	151	61	38	844	63	1104	252	50	968	193	386	1321	72	149	71	190	444	166	29	319	750	169	370	41	17489
	'45-'42	9	10	3	35	3	109	19	4	67	13	57	74	1	20	3	25	62	19	3	18	115	12	17	1	1741
	'41	51	64	20	284	17	347	93	27	340	88	278	569	25	59	15	67	174	84	17	105	634	52	156	27	8922
	'40	25	27	22	226	10	309	72	17	321	49	176	553	26	30	13	61	121	62	10	79	312	38	135	10	6114
	Before '40	72	41	23	289	39	328	56	27	408	65	212	603	43	52	24	51	152	88	14	88	466	49	152	27	8058
	Unid.*	5	2	40	57	5	116	5	1	89	11	1	311	3	2	2	28	53	1	.....	7	12	2	.....	2	1398
	Total	5993	2218	2898	50576	3332	103998	15179	3492	68241	10304	12818	81691	5086	6977	3244	11700	32437	6286	1715	17616	20293	8290	22886	2140	989677

Unid.*—Unidentified as to model year. Data from the Reuben H. Donnelley Corp. are as of July 1, 1958.

For Summaries of Cars and Trucks in Use by Makes, by Model Year, see page 96

• TOTAL REGISTRATIONS •

CARS IN USE BY MAKES, STATES,

Model Yr.	Ala.	Ariz.	Ark.	Calif.	Colo.	Conn.	Del.	D. C.	Fla.	Ga.	Idaho	Ill.	Ind.	Iowa	Kan.	Ky.	La.	Me.	Md.	Mass.	Mich.	Minn.	Miss.	Mo.	Mont.
DODGE																									
'58	967	341	471	7835	975	1461	257	468	1907	1226	410	4333	1948	1131	1077	827	1076	288	1539	2228	4919	1948	362	1167	326
'57	2766	1395	1889	25143	2633	4963	810	1291	7403	3336	1067	14075	7652	3632	3074	2611	3253	1068	5298	6150	17903	5089	1321	4739	1267
'56	2154	1140	1459	20526	2310	4530	695	1056	6743	3055	996	12591	6532	3048	2388	2166	2363	1084	4450	5860	11826	4399	1246	3071	1098
'55	2825	1691	1673	23369	2749	4274	577	1135	7260	3957	1117	15719	8527	4176	3373	2970	3010	1158	4149	6697	17885	4750	1605	4986	1294
'54	1810	823	949	11120	1624	3236	279	667	4070	2189	565	9586	4850	2899	1983	1896	1922	845	2538	4901	7278	2683	969	2541	786
'53	3630	1634	1784	22017	2699	5428	752	986	7577	4280	973	17159	7694	4260	3448	3863	3339	1690	4139	8741	14685	4867	1691	5748	1063
'52	2500	1019	1366	15668	2032	3661	406	992	5639	3060	724	13091	5101	3214	2836	2742	2444	1063	3634	6225	9129	3928	1266	4309	765
'51	2675	1204	1451	19097	2332	4298	498	1037	5923	3190	899	14661	5894	4195	3105	3249	2392	1215	3882	7003	9928	4668	1285	4615	881
'50	4042	1484	1905	23563	3419	4982	653	1301	7576	4306	1034	16854	7482	5625	4273	3861	3576	1541	4228	9026	11059	6361	1807	6306	998
'49	2738	1252	1394	20037	2281	3821	459	798	5521	2812	1042	11872	5938	4749	3058	3233	2784	1132	3112	6816	7588	4347	1251	4934	863
'48	1953	743	748	14176	1463	2593	301	469	3333	2314	526	6511	3146	2162	1805	1878	1686	778	2169	4668	4144	2167	918	2925	490
'47	1025	712	505	12484	1248	2137	202	409	2885	1208	473	4523	2559	1809	1486	1572	1049	626	1549	3240	3021	1832	469	2209	372
'46	505	417	296	7956	628	1127	106	171	1437	598	295	2143	1229	970	789	801	552	267	823	1471	1258	970	208	1180	213
'45-'42	74	133	61	1767	185	127	7	22	195	90	62	279	208	163	126	118	82	48	64	147	192	136	31	139	52
'41	223	224	122	5432	451	495	22	72	638	274	150	670	455	448	361	296	180	160	288	633	579	407	91	504	137
'40	228	197	102	4118	357	416	14	41	501	275	155	617	454	409	296	285	180	115	273	522	448	371	90	525	83
Before '40	282	380	181	9310	806	799	20	93	626	429	243	1054	811	874	658	481	201	242	398	728	1018	951	131	826	238
Unid.*	33	5	23	27	15	45	37	4	199	140	19	368	66	73	50	39	62		110	51	241	28	25	1	3
Total	30420	14794	16379	243645	28207	48393	6095	11012	69433	36739	10750	146086	70546	43837	34186	32888	30151	13318	42643	75107	123101	49902	14766	50725	10929
FORD																									
'58	9282	3841	4793	55096	6213	9178	1683	2647	21693	14289	2491	37836	17489	10674	10821	7527	13342	2138	8928	17028	39341	17656	5497	9813	2630
'57	26421	10322	13590	151026	15540	22134	4433	5461	52228	34095	4682	98220	46325	24029	21304	21121	31416	6360	22836	36846	97368	32837	13894	35660	5694
'56	22491	9584	12812	122426	13608	19970	3630	4783	43804	31439	4544	81311	39304	20088	19390	18878	25864	6686	21331	36321	76419	25796	13321	27566	5767
'55	24132	9364	13469	118484	14823	18087	3445	4567	42558	31048	4509	74107	39135	23191	20541	20422	25713	5716	18117	35605	85304	27377	12910	33117	5525
'54	18749	6879	10492	92313	11610	16509	2359	3470	31124	23750	3235	59697	31168	21036	17885	16818	19688	4742	18890	30177	68022	22789	10142	27191	4213
'53	20746	7372	10195	102630	11707	16464	2598	3351	28926	24434	4158	61775	30825	19772	17455	19178	18955	5382	15936	30953	74033	24309	10958	27010	4726
'52	10856	3945	5498	53359	6763	7869	1159	1710	15364	13389	2466	29303	15529	10409	9659	10905	9209	3082	8835	15523	33602	12399	6004	13951	2420
'51	17524	5596	7735	75006	9352	10710	1516	1870	19928	21497	3409	34426	20545	15996	13806	17581	12533	4172	9961	21197	39989	18981	10000	19058	3278
'50	21172	6229	9289	85945	10863	11068	1624	1900	22020	25634	3778	36773	21757	20842	16599	19928	14467	4134	11295	22372	38433	22490	11947	22966	3524
'49	12956	4604	5572	62667	7821	7462	1058	1094	13843	14344	3036	23961	14178	16773	11666	13750	8830	2570	6672	14092	21512	15968	7574	16074	2598
'48	3273	827	1228	12154	1549	1234	181	136	2657	4002	608	3958	2218	2866	2319	2282	2102	658	1592	2402	4560	2835	1863	2902	508
'47	3133	1231	1634	18933	2315	1722	206	166	3578	4608	975	4748	3116	3549	3317	2938	2557	801	1491	3125	5870	3733	2049	3948	726
'46	3456	1087	1589	14714	2014	1487	156	124	3147	4954	729	3844	2295	3464	3011	2384	2406	751	849	2641	3930	3926	2417	3413	613
'45-'42	420	359	253	4720	835	244	26	34	932	524	275	686	352	603	540	387	439	130	331	433	724	713	250	508	249
'41	1228	615	676	10275	1187	931	57	73	1464	1935	426	1513	1031	1767	1716	844	960	358	421	1435	1669	2669	913	1668	416
'40	1269	485	443	9345	1118	722	70	69	1556	3094	324	1449	1067	1706	1369	790	815	300	384	1213	1721	2115	748	1200	331
Before '40	2654	1852	1406	38801	3736	2629	207	199	4629	4599	1134	6606	4108	6648	5873	2736	1938	1166	1232	2967	8704	9362	1471	4709	1493
Unid.*	190	66	120	122	43	84	197	33	957	923	19	1297	262	434	226	239	347	23	346	148	1291	127	233	9	19
Total	199952	74258	108794	1028046	121097	148504	24604	31687	310408	258558	40798	561490	290704	203847	177499	178708	191579	49169	149447	274478	602492	246082	112191	250763	44730
HUDSON																									
'58																									
'57	86	27	33	202	77	86	4	7	124	31	56	359	160	86	93	61	28	47	63	153	261	103	17	48	39
'56	231	128	131	2359	427	574	20	88	857	82	266	1732	752	477	420	209	148	246	293	1095	1471	603	66	178	278
'55	369	305	271	4254	559	790	20	126	1298	171	276	4300	1276	633	598	295	225	241	496	1445	1800	854	115	393	296
'54	458	247	237	2482	625	862	37	191	1152	274	195	4863	1505	642	699	401	222	323	618	1580	2348	956	122	509	352
'53	740	417	246	5391	748	1111	112	192	1497	557	380	5030	1695	668	789	600	416	374	947	1639	3345	1106	259	750	387
'52	710	429	222	6277	923	985	89	231	1503	546	332	3985	1503	559	989	660	331	359	1183	1362	2427	917	233	793	367
'51	959	744	451	9839	1596	1560	154	264	2277	874	590	6455	2588	1360	1549	1037	544	556	1338	2467	3844	1884	306	1384	605
'50	690	635	293	8755	1359	963	78	219	1752	598	434	4810	1960	1192	1159	816	427	366	882	1922	2621	1922	227	1098	443
'49	688	577	380	7112	1577	950	80	213	1517	628	496	3517	1861	1462	1320	915	580	427	866	1607	1955	1793	293	1497	437
'48	313	257	149	4135	361	517	32	79	662	268	228	1049	582	492	547	363	178	182	417	846	958	558	135	579	148
'47	186	123	76	2011	170	227	11	31	374	185	111	552	322	247	264	162	132	82	153	396	533	197	75	338	74
'46	111	96	38	1442	107	149	10	19	299	105	75	307	210	171	190	111	50	70	70	242	350	152	46	182	43
'45-'42	11	26	7	235	23	19	2		36	20	21	60	29	33	38	6	5	12	7	27	54	25	9	19	15
'41	42	39	12	627	55	57	3	6	87	35	29	115	76	77	66	15	14	28	33	89	153	61	6	57	21
'40	19	28	10	327	48	37	2	3	74	27	20	91	75	73	52	25	12	23	13	67	73	54	5	32	12
Before '40	34	54	11	609	117	77	3	8	80	41	35	142	113	119	123	31	28	44	33	83	177	165	18	78	48
Unid.*	6	1	6	9	8	9	6		54	24	3	106	21	9	17	4	9	5	31	16	72	7	5	3	
Total	5663	4136	2573	56066	8780	8973	663	1677	13643	4466	3547	37473	14728	8300	8893	5711	3349	3385	7443	15036	22442	11357	1937	7938	3565
KAISER-FRAZER																									
'58																									
'57																									
'56	2		3	4			1		5	9	1	18	7		1	1	5	3	3	6	10		3	1	1
'55	4	6	13	52		11	1	2	12	6	1	18	11	11	8	7	9		5	24	22	3	1	4	
'54	40	61	31	820	61	127	15	27	291	100	36	460	246	148	132	87	110	34	134	182	298	163	22	104	48
'53	496	293	178	4364	273	588	78	86	1338	535	134	1789	1100	385	671	393	512	267	487	981	1948	661	166	376	144
'52	608	411	346	4215	246	671	108	115	1348	523	169	1838	1027	437	646	476	541	241	938	1020	1670	706	238	446	152
'51	1399	953	713	10807	1079	2103	256	235	3890	1449	507	6146	3099	2308	2011	1444	1452	511	1227	2484	4107	2954	718	1565	467
'50	105	57	50	1149	95	106	21	13	223	67	46	380	199	224	154	123	76	40	382	144	202	289	52	171	42
'49	275	226	163	2543	311	282	55	43	640	192	189	1309	728	889	614	374	322	124	306	398	725	946	149	743	185
'48	241	237	161	2681	340	280	47	41	643	192	239	1545	734	988	687	334	268	82	337	416	746	753	118	815	155
'47	150	160	79	2453	151	183	12	22	470	110	149	497	271	258	285	169	117	53	127	244	285	269	76	265	91
'46																									
'45-'42																									
'41																									
'40																									
Before '40																									
Unid.*	39	4	13	166	25	40	9	5	80	44	7	98	46	45	22	23	41	4	35	27	97	16	8	23	3
Total	3359	2398	1750	29254	2571	4391	603	589	8940	3227	1478	14098	7468	5693	5231	3431	3453	1359	3981	5926	10110	6760	1551	4513	1288
LINCOLN																									
'58	142	158	83	2469	206	363	42	107	871	236	94	1555	461	159	183	146	239	39	182	433	1441	366	67	192	70
'57	371	297	163	5530	425	710	140	206	1938	373	145	2990	972	361	322	256	437	154	430	963	2345	677	158	524	117
'56	431	349	212	7370	597	687	121	238	2286	527	219	3503	1283	499	483	339	523	130	538	1186	2792	778	198	651	183
'55	287	196	130	3485	336	493	85	114	1156	279	109	1774	652	318	280	148	296	94	310	782	1371	374	113	411	113
'54	334	314	166	4819	567	629	106	144	1475	350	144	2231	852	403	370	258	365	120	451	1007	1644	544	118	495	120
'53	431	305	151	6167	604	642	90	143	1479	449	174	2210	963	460	454	274	402	123	526	986	1932	559	151	497	157
'52	265	211	114	4436	410	448	62	102	1036	288	94	1351	579	267	278	216	270	106	355	648	1075	362	109	344	101
'51	299	202	120	3473	361	464	51	129	1044	324	112	1393	614	318	272	214	246	93	388	683	1064	464	147	424	111
'50	307	147	82	2762	311	306	46	94	896	318	95	911	432	268	228	194	229	90	345	582	727	296	114	379	79
'49	354	260	132	4389	450	458	67	148	1174	328	145	1191	576	406	371	352	276	104	320	743	704	485	183	533	139
'48	29	20	7	580	31	52	3	13	103	41	9	115	52	19	30	25	27	10	58	58	73	36	8	36	8
'47	20	49	14	692	45	93	4	8	128	35	28	98	42	40	39	41	36	18	35	106	72	40	16	42	8
'46	10	28	6	307	25	32	3	5	53	20	14	57	29	18	13	18	13	8	10	45	43	29	8	25	6
'45-'42	3	12	1	122	7	10			10	7	3	13	10	2	2	5	6	1	4	12	15	14	3	5	2
'41	12	25	6	388	29	46	2	6	30	8	2	39	17	25	11	15	12	7	6	47	32	23	5	18	7
'40	7	19	2	308	20	25	2	1	19	12	5	19	5	14	11	10	5	2	11	19	10	8	3	10	5
Before '40	15	30	6	464	36	41	3	1	38	14	7	42	19	24	8	10	4	9	8	49	52	31	4	15	17
Unid.*	2			2	2	7	2		37	14		35	13	10	7	5	6		14	4	32		2		
Total	3319	2622	1395	47763	4461	5508	829	1459	13771	3823	1399	19527	7571	3611	3362	2526	3392	1108	3991	8335	15424	5086	1407	4601	1243

Unid.*—Unidentified as to model year. Data from the Reuben H. Donnelley Corp. are as of July 1, 1958.

For Summaries of Cars and Trucks in Use by Makes, by Model Year, see page 96

AND MODEL YEAR—*continued*

Make	Model Yr.	Neb.	Nev.	N.H.	N. J.	N.M.	N. Y.	N. C.	N.D.	Ohio	Okla.	Ore.	Pa.	R. I.	S. C.	S. D.	Tenn.	Tex.	Utah	Vt.	Va.	Wash.	W.Va.	Wis.	Wyo.	Totals
DODGE	'58	567	111	182	3518	402	9120	1202	439	5561	570	521	6396	316	469	313	1051	3313	365	191	1603	843	603	1448	163	78744
	'57	1345	445	840	12989	1083	30773	3356	1001	22258	2318	2610	21239	908	1452	806	3363	11150	1076	503	4195	3628	3249	6024	445	266885
	'56	1380	365	825	10722	762	23474	3208	803	18766	1985	2686	19208	762	1478	601	2675	8235	816	468	3949	3513	2590	5400	437	221894
	'55	1933	496	903	9854	1118	22925	4113	1052	19612	2457	2976	21298	1176	1969	994	3805	11143	1250	463	4689	4387	3219	5567	536	258891
	'54	1272	274	628	6165	606	17344	2397	597	11022	1428	1421	10714	780	1145	729	2239	6346	453	425	2890	2331	1620	3302	312	149429
	'53	1853	501	1066	10631	1074	30655	4946	885	19379	2478	2652	20905	1662	2220	1153	4597	13239	1268	778	4687	4204	3108	5786	491	274365
	'52	1455	308	634	8067	750	21896	3354	650	12987	2547	1820	14592	1029	1528	740	3275	9739	793	523	3813	2987	2241	4870	355	197573
	'51	1982	343	773	10418	746	24567	3773	800	14885	2449	2214	17069	1260	1920	987	3297	9559	944	471	4069	3925	2641	5981	422	225072
	'50	2551	392	924	12882	889	28731	4992	853	18082	3275	3082	20811	1734	2583	1164	4591	13781	1291	579	5187	5066	2894	6861	563	281020
	'49	2168	320	728	9725	734	19933	3871	771	13250	2512	2727	15543	1312	1958	1060	3258	10550	1066	421	3990	4577	2453	5218	460	212437
	'48	1030	250	499	6358	378	10890	2022	400	7393	1455	1561	9388	763	1149	610	1924	5044	668	277	2385	2828	1460	2672	219	125687
	'47	892	211	314	5349	340	8239	1730	267	5733	1143	1452	7371	548	839	486	1436	4161	551	169	1894	2541	1211	2126	181	98788
	'46	459	132	122	2620	184	3540	963	147	2705	674	934	3832	281	485	249	787	1940	279	74	927	1533	577	1096	102	51052
	'45-'42	105	34	21	222	50	388	89	31	307	103	256	318	38	70	35	100	390	78	17	125	480	74	118	34	7991
	'41	227	86	61	891	97	1186	288	69	1039	313	651	1451	139	179	94	279	833	154	46	412	1236	231	456	64	23794
	'40	196	62	65	724	74	868	278	49	959	250	498	1243	109	192	95	274	847	139	33	323	814	190	407	58	19819
	Before '40	436	183	102	1142	127	1411	375	142	1726	570	827	2296	194	301	192	358	1060	281	61	485	1627	350	866	116	37008
	Unid.*	32	2	69	69	13	288	4	2	102	32	3	1240	16	2	2	105	210		1	41	43	3			3943
	Total	19883	4515	8756	112346	9427	256028	40961	8964	175766	26559	28891	194914	13028	19969	10310	37414	111540	11472	5500	45664	46563	28714	58198	4958	2534392
FORD	'58	6196	791	1369	17079	2986	45682	12387	3541	35224	5901	6026	31123	2765	5259	3331	10280	40269	2296	1537	12855	6943	4441	12540	1081	603828
	'57	12317	2921	4158	50907	7097	119997	32304	6536	99023	20038	14848	77426	6271	15622	5505	26181	103215	6343	2986	30651	20835	16740	34039	2785	1552587
	'56	10445	2623	4302	46358	6589	98866	33722	5143	86085	19544	14172	81387	5447	16190	4593	22974	84917	5164	3089	29423	20399	13367	28205	2552	1352689
	'55	12215	2528	4617	40767	6728	90528	34697	4934	82292	22750	13473	72710	5522	16457	5648	25235	86452	5708	2620	28218	19994	11444	28437	2550	1337788
	'54	11492	1720	3611	36076	5059	77730	25876	4368	64855	19585	9679	56662	4941	12667	5159	20190	67655	4028	2228	23400	16668	9268	24556	2031	1082450
	'53	11452	1983	3532	37845	5244	74222	30784	4966	67803	17736	11929	69092	5536	15705	4830	21069	68184	5029	2438	24915	20033	11059	24429	2263	1135926
	'52	6662	1051	1977	19349	2749	36124	16229	2707	33344	11339	6414	34371	2971	9211	2651	11279	34883	3055	1237	13493	10801	5820	13049	1192	585166
	'51	9850	1418	2508	25971	3700	46369	27314	4086	44245	14380	8885	44415	4549	15704	4210	18071	48298	4337	1620	18866	15262	9390	17286	1576	807978
	'50	11940	1491	2529	26393	3960	44070	31937	4322	43978	17085	10194	46704	4840	21245	4891	20721	57239	4831	1383	21143	17465	10797	20259	1786	898252
	'49	9142	1193	1513	17067	2755	25643	18844	3587	26502	10404	7834	27693	2902	13764	3830	13852	35772	3427	808	13397	13969	7423	13947	1389	587332
	'48	2412	234	379	2232	581	3456	3625	756	4644	3646	1509	4017	450	2552	928	2741	7680	609	228	2424	2845	1415	2017	270	112564
	'47	2985	395	424	3438	670	4726	5491	1090	6486	3967	2248	5943	547	3820	1149	3358	9501	866	242	3779	4277	2152	2920	416	151358
	'46	2716	304	330	2656	532	3213	4491	1037	4367	3016	1871	5296	506	3479	1230	3016	8114	702	192	2612	3195	1547	2559	326	126708
	'45-'42	415	126	75	428	275	621	386	201	675	567	278	506	82	300	169	512	2056	423	44	545	1409	132	435	129	25736
	'41	1638	172	188	1167	334	1000	1745	750	1721	1905	997	1899	249	1706	600	1082	4395	465	90	1149	1808	507	1461	248	63523
	'40	1391	176	185	983	281	1027	2933	448	1905	1484	840	1813	229	2468	505	1328	4039	336	93	1484	1425	500	1202	199	60977
	Before '40	5304	904	656	3504	879	3289	3531	2292	8111	4898	2954	6915	738	4102	1778	2289	10147	1126	393	2840	5506	1848	6123	757	201743
	Unid.*	183	10	303	130	79	742	25	9	396	255	10	4285	54	28	23	490	783		7	195	152	15	9	7	15945
	Total	118755	20040	32656	332350	50498	677305	286321	50773	611656	178500	114161	572257	48599	160279	51028	204668	673599	48745	21235	231389	182986	107865	233473	21557	10702550
HUDSON	'58																									
	'57	48	2	31	108	9	538	27	24	292	51	44	409	38	10	14	41	117	25	22	52	96	41	186	13	4489
	'56	157	15	169	782	68	1921	295	131	1342	192	262	1866	152	70	130	198	689	140	71	394	654	267	1528	77	24701
	'55	220	74	241	1247	100	2485	518	125	2074	315	436	2641	228	286	180	358	1111	202	63	701	897	401	1991	98	38398
	'54	230	58	304	2079	119	4142	445	112	3025	341	397	3168	311	279	131	376	858	197	62	886	782	370	1293	121	41986
	'53	324	117	325	2336	219	4855	686	143	3609	438	745	3720	355	430	187	580	1342	372	77	972	1237	447	1468	129	54489
	'52	402	160	233	2397	230	4525	663	155	3205	576	873	3789	284	419	180	648	1562	446	102	1106	1284	448	1219	196	52997
	'51	827	209	363	4000	356	6380	1062	315	4931	826	1415	6026	400	617	433	992	2223	801	130	1423	2202	780	2633	301	84870
	'50	519	169	223	2819	215	4637	761	167	3419	749	1003	3950	333	461	349	705	1833	709	111	953	1559	516	2102	210	64093
	'49	502	149	210	2363	236	3479	780	255	3252	674	1041	3707	307	486	415	780	1748	799	126	949	1540	602	1744	250	59122
	'48	262	78	90	1233	82	1592	420	85	1342	373	515	1657	186	227	98	320	847	204	34	399	871	288	614	53	25885
	'47	95	29	45	510	32	638	217	29	570	133	289	774	82	149	43	149	369	81	17	170	533	162	258	34	12440
	'46	63	30	27	272	19	363	154	20	391	118	205	476	46	122	31	103	239	56	14	118	388	68	165	18	8151
	'45-'42	20	6	2	29	4	32	14	4	63	17	35	91	4	16	2	10	32	23	1	19	77	6	31	6	1283
	'41	20	15	18	110	5	110	33	8	153	28	103	191	12	33	7	18	72	32	7	30	183	33	104	15	3143
	'40	19	8	14	65	4	82	20	7	118	19	49	170	8	21	8	23	37	16	7	21	96	17	65	12	2108
	Before '40	45	20	24	111	10	123	40	25	168	52	89	249	20	41	21	27	88	49	20	23	195	32	122	28	3893
	Unid.*	7		43	16	3	74	3	1	21	8		256	8		4	12	28	9	1	14	13	1		1	952
	Total	3760	1139	2362	20477	1711	35976	6118	1606	27975	4908	7501	33120	2754	3667	2233	5340	13195	4161	865	8230	12607	4479	15523	1562	483000
KAISER-FRAZER	'58																									
	'57																									
	'56				2	1	27	5		10		4	1		3		1	13			2	1		2		156
	'55	1		3	20	1	89	6	2	40	1	4	24		2		2	31	1		14	14	7	8		502
	'54	55	1	39	284	12	682	71	27	612	46	100	590	48	39	35	42	119	36	14	172	150	50	294	10	7295
	'53	297	11	134	1448	102	2846	522	81	2634	178	508	2991	238	302	99	408	1250	216	84	686	802	298	716	28	35158
	'52	275	51	145	1905	136	2792	813	88	2258	246	584	3275	230	468	98	503	1620	249	68	937	1006	375	693	31	37990
	'51	1028	59	302	6017	391	7243	2386	421	6407	806	1983	8608	737	1193	636	1298	3496	685	199	2050	3366	1259	3073	133	107804
	'50	77	203	36	211	51	309	111	46	350	209	124	645	38	32	71	60	160	55	12	127	286	86	247	13	7784
	'49	406	18	56	750	107	1125	300	224	1300	230	524	1849	117	129	281	270	657	227	36	364	901	259	901	60	23863
	'48	495	59	43	960	107	1027	348	149	1157	329	568	1146	111	144	260	285	676	170	28	316	759	210	788	73	23274
	'47	229	65	25	477	56	546	204	70	511	172	340	580	53	115	116	133	372	96	16	181	591	122	261	44	12318
	'46		62																							
	'45-'42																									
	'41																									
	'40																									
	Before '40																									
	Unid.*	36	3	13	45	10	218	19	3	87	20	22	282	17	8	3	30	96	5	2	5	84	5	54	1	1988
	Total	2899	532	796	12119	974	16904	4785	1111	15366	2237	4761	19991	1589	2435	1599	3032	8490	1740	459	4854	7960	2669	7017	391	258132
LINCOLN	'58	114	64	31	856	92	2112	199	85	989	131	164	952	77	74	45	164	779	90	19	265	200	83	307	30	18225
	'57	187	151	99	1789	163	3972	465	121	2547	309	436	2195	184	161	90	314	1408	198	37	507	506	244	746	88	37921
	'56	264	189	143	1991	217	4539	552	143	3032	434	629	2910	184	228	111	398	2008	293	59	649	677	297	990	105	47165
	'55	136	82	104	974	162	2403	365	69	1622	364	324	1493	115	156	87	220	1405	160	38	342	482	168	505	56	25518
	'54	226	125	110	1360	179	3195	343	85	2225	433	377	1932	164	176	96	318	1788	218	45	501	612	219	593	87	33433
	'53	278	123	96	1347	221	2954	563	100	2396	389	516	2002	132	241	118	346	1698	268	46	580	774	251	651	98	36517
	'52	174	84	75	859	110	1713	369	61	1578	305	313	1301	85	203	82	229	1118	175	28	378	486	168	391	61	23873
	'51	164	82	62	1041	136	1871	377	49	1470	247	326	1452	114	210	90	264	1071	172	28	451	504	197	430	74	23892
	'50	186	100	57	791	93	1443	319	41	1097	271	270	1089	79	189	77	174	829	133	16	338	398	169	359	64	18822
	'49	205	158	67	1277	129	1767	445	80	1420	329	450	1694	149	237	160	308	1072	253	38	452	796	296	550	78	26698
	'48	13	11	8	114	9	182	41	7	93	71	33	177	13	20	6	17	110	12	3	34	65	7	25	4	2518
	'47	18	22	9	145	18	220	27	4	109	36	66	148	23	21	10	24	105	16	1	31	92	15	55	5	2969
	'46	10	9	2	60	5	96	10	5	57	21	38	96	10	8	5	11	39	10	3	18	47	5	24	2	1416
	'45-'42	3	3	2	13	7	13			12	5	10	14	3	1	2	2	18	5		2	13	2	2		401
	'41	7	10	5	56	4	88	12	2	35	22	25	72	11	10	1	10	36	9	2	23	43	8	20	7	1336
	'40	11	11	3	40	7	40	11	4	24	19	12	29	1	6		8	30	7	1	5	39	4	6	5	875
	Before '40	20	8	5	44	4	66	16	7	53	19	19	57	10	5	9	1	33	9	10	12	70	9	13	4	1450
	Unid.*	2		7	17	3	40	1		19	10	1	146	1		1	7	31		1	2	6		1		490
	Total	2018	1232	885	12774	1559	26714	4115	863	18778	3415	4009	17759	1355	1948	990	2815	13578	2028	375	4590	5810	2142	5668	768	303519

Unid.*—Unidentified as to model year. Data from the Reuben H. Donnelley Corp. are as of July 1, 1958.

For Summaries of Cars and Trucks in Use by Makes, by Model Year, see page 96

CARS IN USE BY MAKES, STATES,

Model	Yr.	Ala.	Ariz.	Ark.	Calif.	Colo.	Conn.	Del.	D. C.	Fla.	Ga.	Idaho	Ill.	Ind.	Iowa	Kan.	Ky.	La.	Me.	Md.	Mass.	Mich.	Minn.	Miss.	Mo.	Mont.
MERCURY	'58	985	532	455	6881	976	1236	224	337	2334	1206	449	5129	1958	1221	1132	1027	1272	281	1003	1813	6131	1930	379	883	389
	'57	3957	1863	2289	26384	3000	3529	915	1065	8401	4100	1094	16761	7927	4062	3579	3335	4584	1145	3734	6049	18946	5543	1899	5021	1016
	'56	4528	2009	2658	39940	3375	4810	893	1048	9268	4771	1248	19750	9082	4261	4110	3876	4827	1288	4219	7019	16973	5806	2297	6084	1248
	'55	4214	2011	2371	39859	3676	4186	704	1101	9465	5345	1157	20306	8293	4573	4175	3274	4224	1166	4066	6677	19234	5323	2040	6767	1145
	'54	3088	1593	1502	28562	3084	4265	481	878	6798	3788	935	13617	5662	3692	3141	2597	3158	1013	3605	6626	12194	4441	1403	4907	866
	'53	4607	1909	1863	31578	3616	4433	539	953	7857	4990	1236	17667	7198	4668	3757	3508	3621	1217	3826	7769	13838	5463	2056	5996	1121
	'52	2377	1299	1065	19012	2115	2481	265	461	4105	2561	819	8858	3622	2351	2210	2090	1907	712	2117	3871	6211	3010	1180	3101	670
	'51	3907	1825	1775	28246	3441	3962	393	627	6720	4303	1202	12533	5543	4481	3676	3557	3078	1210	2604	6325	10671	5416	1840	5578	1081
	'50	4157	1504	1529	24925	3281	3418	375	551	6522	4382	894	9873	4137	4238	3294	2877	2948	991	2888	5444	8402	4945	1769	5614	891
	'49	2588	1181	1008	18131	2450	2229	246	331	3918	2603	840	6153	2771	3436	2497	2279	1962	704	1392	3893	4743	3743	1214	3400	690
	'48	519	151	171	2608	309	290	21	36	537	573	90	716	396	275	289	360	262	100	346	487	610	377	256	404	78
	'47	442	283	229	4498	504	433	50	26	674	640	183	771	426	421	402	416	348	136	210	752	903	566	282	537	119
	'46	388	178	179	3385	410	313	19	18	547	482	123	527	341	369	321	283	280	94	114	469	523	536	241	513	110
	'45-'42	30	27	25	394	54	24	1	2	51	45	18	90	50	43	36	25	37	10	8	36	65	63	22	53	12
	'41	123	101	58	1683	160	127	8	8	176	165	56	148	83	140	125	50	80	29	42	142	162	214	71	149	55
	'40	78	67	37	1300	194	106	5	6	155	128	45	159	90	99	102	59	50	28	28	119	139	178	39	125	31
	Before '40	49	44	32	715	92	65	2	8	124	70	20	131	53	96	61	29	48	20	28	55	145	95	26	66	21
	Unid.*	22	15	20	14	13	23	13	3	184	154		292	49	106	54	40	54	3	54	34	263	21	30	6	7
	Total	36029	16592	17266	278095	30750	35930	5154	7459	67836	40306	10409	133481	57681	38532	32961	29682	32740	10150	30284	57580	120153	47670	17044	49184	9550
NASH	'58																									
	'57	685	221	241	3343	343	491	107	40	632	456	181	1961	1154	446	346	200	234	173	137	2060	981	475	186	764	72
	'56	549	573	316	7745	1015	1966	134	179	1960	656	460	5649	1872	896	1052	425	565	574	870	3418	4041	1307	155	1269	395
	'55	936	682	394	10028	1267	2316	132	277	2663	946	443	7638	2920	1281	1417	775	653	633	1076	4673	4628	1567	330	1899	396
	'54	614	543	258	6576	972	1691	98	181	2350	712	342	6298	2550	1113	1300	724	569	433	1075	3751	4221	1504	246	1502	347
	'53	1033	690	568	10868	1170	2214	195	205	2922	996	547	9371	3884	1668	1594	1508	794	587	1558	4647	6103	1923	394	2649	404
	'52	1397	886	727	13798	1630	1904	210	308	3825	1360	691	9080	3468	1799	2381	1605	1291	492	1925	3770	5525	2383	657	3455	392
	'51	1636	1242	926	18579	2323	2488	285	380	4961	1794	895	11198	5027	2984	3051	2088	1182	722	1888	4837	5678	3328	730	5057	588
	'50	878	702	529	11081	1662	1072	120	166	2380	802	631	5563	2673	1951	1717	1112	579	391	1019	2540	2120	2560	391	2894	404
	'49	474	432	222	5227	796	659	68	96	1255	469	391	2928	1322	999	826	620	377	218	598	1318	1212	1447	273	1282	291
	'48	468	264	209	4358	594	842	74	89	960	540	220	2119	815	554	614	445	338	218	564	1440	1423	955	281	909	199
	'47	223	198	128	3011	322	472	34	34	559	281	137	969	427	334	357	239	198	123	297	764	697	570	164	501	123
	'46	119	136	83	1997	214	242	21	13	303	149	83	540	216	189	217	157	117	61	147	367	309	351	85	316	84
	'45-'42	5	14	3	188	19	23		1	29	9	10	79	38	25	16	10	7	4	14	35	45	45	8	16	10
	'41	30	28	14	549	57	71	2	7	76	18	28	181	70	62	59	21	11	9	35	73	74	125	11	80	34
	'40	12	18	12	298	35	46	1	5	41	6	17	99	42	63	26	15	9	14	22	62	47	88	4	65	11
	Before '40	52	42	17	717	136	119	1	6	67	31	45	225	97	130	74	48	17	46	48	140	122	214	21	102	51
	Unid.*	10	9	20	13	7	11	14	9	121	61	5	212	30	82	30	19	15	12	58	29	107	10	9	2	5
	Total	9123	6700	4667	98376	12562	16627	1496	1996	25114	9286	5126	64110	26605	14576	15077	10011	6966	4710	11331	33923	37333	18852	3925	22762	3806
OLDSMOBILE	'58	2728	1030	1275	14312	1764	2912	600	788	6006	3698	836	16370	6116	2768	2668	2558	3745	437	2101	5412	13724	5049	1425	2726	758
	'57	4800	2224	2381	30110	3474	5187	1113	1545	11063	5912	1204	27680	11690	5273	4755	4790	6793	1238	5486	10683	20734	8315	2751	7648	1425
	'56	6049	2566	3179	40507	4124	7763	1157	1873	14531	7335	1373	32140	14432	5348	5376	5996	8283	1644	6878	15642	25285	9734	3458	8304	1616
	'55	7215	2973	3716	53002	5828	8639	1159	2400	18225	8618	1817	40599	15993	7567	6550	6261	8723	1585	7285	16918	29923	11239	3482	11360	1997
	'54	3925	2002	1845	33642	4095	5294	796	1305	10361	4397	1117	24608	9598	5160	4452	3741	4428	1091	4235	10930	16456	7717	1828	6672	1346
	'53	4370	1966	1650	31176	3778	5076	772	1154	9222	4591	1269	19557	8880	4814	4011	4221	3747	1182	3614	10160	14198	6407	1749	5998	1343
	'52	2659	1269	1010	19982	2378	2992	417	676	5337	3017	820	10125	5027	2767	2555	2652	2290	898	2395	5569	7240	3679	1226	3438	762
	'51	3566	1522	1293	25787	2895	3996	517	653	6205	3786	1032	11196	6139	3901	3034	3550	2614	1120	2583	7782	7599	4594	1565	3976	914
	'50	4635	2028	1618	35897	3983	5469	720	886	7875	5736	1243	13520	7092	5269	3782	4514	3262	1549	3185	10365	8808	6134	2047	5481	1143
	'49	2153	1118	802	20797	2062	3157	372	485	4234	2212	812	7415	4041	2952	2140	2687	1644	927	2131	6176	4675	3380	942	3181	667
	'48	802	499	425	9037	843	1375	173	228	1869	873	313	3615	1931	1261	1080	1130	718	412	942	2765	2669	1348	401	1637	282
	'47	487	427	250	6885	732	1019	132	136	1336	580	278	2130	1232	922	844	762	419	301	660	2014	1422	899	241	1217	229
	'46	207	208	113	3214	320	432	43	48	542	218	144	773	432	373	358	297	206	129	196	788	475	395	81	522	94
	'45-'42	33	34	22	616	50	58	10	5	98	42	20	139	137	53	52	33	34	24	33	76	88	54	16	74	18
	'41	134	186	85	4034	316	496	29	54	472	163	119	624	322	318	354	234	122	137	184	752	457	342	87	405	127
	'40	86	100	63	2490	197	282	16	18	354	138	89	388	262	218	224	164	77	132	141	436	311	227	57	288	98
	Before '40	122	196	68	3883	380	418	23	41	389	170	125	588	395	369	296	224	101	199	224	601	522	442	67	369	120
	Unid.*	37	7	19	36	15	27	50	6	283	193	5	397	66	113	76	56	73	1	69	60	328	41	37	6	5
	Total	44208	20355	19814	335407	37234	54592	8099	12301	98402	51739	12616	211864	93785	49446	42607	43870	47279	13006	42342	107129	154914	69996	21460	63302	12944
PACKARD	'58	9	9	6	139	9	25	3	15	48	29	12	132	84	9	23	28	14	7	16	44	83	22	8	15	6
	'57	44	21	28	276	54	106	14	9	124	64	32	347	197	55	60	47	54	22	60	94	179	94	23	79	22
	'56	192	187	87	2363	281	577	47	139	815	285	113	1894	812	273	321	193	280	117	526	778	1210	546	107	402	140
	'55	393	335	203	4485	527	1190	87	323	1720	542	233	3509	1510	636	648	430	537	222	954	1387	2658	1074	227	819	272
	'54	217	233	93	2115	310	666	57	133	1076	303	77	2230	679	333	257	272	230	134	568	920	1332	585	90	442	165
	'53	770	506	298	6811	756	1660	143	455	3056	894	248	5400	2596	694	840	815	978	344	1081	2211	4347	1572	352	1355	318
	'52	666	461	299	5198	653	907	95	265	1993	660	247	2718	1286	664	727	652	732	194	904	1166	2110	1000	362	1119	214
	'51	766	575	337	7954	922	1461	142	340	2576	843	320	4368	1808	996	986	936	691	284	991	1870	2549	1709	359	1376	280
	'50	530	296	225	4560	614	802	79	176	1577	538	210	2386	1071	753	700	601	401	194	746	995	982	1263	219	892	160
	'49	495	359	289	4621	581	747	74	178	1566	579	224	2589	1205	886	717	650	414	190	869	1141	1363	1098	252	1144	239
	'48	246	324	159	5323	405	698	69	116	1011	307	130	1452	716	602	380	394	232	179	475	908	992	546	140	554	135
	'47	91	113	39	1903	135	248	20	35	322	152	52	352	182	120	115	120	83	55	164	307	227	166	40	195	60
	'46	63	72	31	1216	79	137	9	16	166	60	17	181	98	70	60	72	48	19	82	126	77	85	30	127	29
	'45-'42	22	26	2	502	38	48	3	5	51	21	10	75	31	22	13	27	22	10	26	48	42	43	14	34	9
	'41	38	64	26	1253	87	203	7	22	188	55	14	174	54	58	45	48	33	44	95	207	82	89	13	110	32
	'40	36	61	9	1104	83	225	3	12	137	64	20	180	81	62	35	48	29	37	87	176	101	92	18	94	26
	Before '40	67	92	30	2162	177	422	13	35	220	85	21	316	124	113	90	97	50	66	162	347	236	214	20	164	38
	Unid.*	2		3	16	5	6	13	3	44	32		75	8	10	7	9	12		49	10	49	6	3		
	Total	4647	3734	2160	52001	5716	10128	878	2277	16690	5513	1980	28378	12542	6356	6024	5439	4840	2118	7855	12735	18619	10204	2277	8921	2145
PLYMOUTH	'58	2553	1168	1350	21347	2311	4414	963	1473	7228	3870	1001	13739	6080	3044	2882	2571	3060	793	4112	7281	13505	5307	1261	1913	805
	'57	7142	3461	3849	50659	5911	10028	2138	3161	17989	7868	1938	38056	18143	8298	6961	6900	8590	2760	12726	16045	41420	11471	3682	7207	2196
	'56	5724	2610	3599	40769	4000	7783	1614	3598	12143	6883	1544	29443	13218	6021	5113	5307	5913	2420	10317	14176	24808	7828	3594	7038	1724
	'55	8777	3622	4659	44430	5240	10047	1686	4209	15770	9384	1837	40984	18512	9048	7330	7398	8431	3214	11189	18383	36230	10511	4979	12987	2092
	'54	5132	2225	3164	24895	3236	7181	876	2368	10633	5955	1091	24662	11086	6329	4932	4751	5785	2207	7326	13264	18159	7261	3026	5744	1553
	'53	8769	3194	5234	43749	5387	8800	1188	2599	13765	9519	1874	35143	17931	9706	7906	8226	8464	3063	9397	16668	27666	11980	4977	7854	2009
	'52	5052	1890	2855	27541	3418	4943	693	1772	7625	5509	1291	18749	8703	5527	4655	4705	4882	1839	6238	9912	13980	6840	2846	4792	1216
	'51	7773	2777	4126	39971	5305	7771	1012	2103	12036	8301	1801	28862	13681	9133	7164	7710	6728	2591	7859	15049	20589	10931	4292	6418	1831
	'50	8159	2485	4133	41789	5620	7627	858	1864	11952	8341	1895	26224	13106	9284	7494	7640	7000	2412	7464	14813	17127	11277	4177	7569	1754
	'49	6931	2438	3380	37372	5098	6750	856	1405	9892	6310	1783	21755	11589	9298	6821	7070	5475	2047	6563	12830	13382	9929	3331	4299	1667
	'48	3816	1389	1595	22382	2569	3464	459	711	4788	4465	943	10735	5685	4386	3676	3712	3039	1207	3558	6869	6564	4814	2169	2538	819
	'47	2270	1137	1033	17872	2002	2706	308	466	3560	2571	788	6941	4084	3612	2816	2706	1906	833	2401	4825	4205	3617	1293	1610	678
	'46	1081	613	626	9772	1136	1515	146	225	1980	1232	409	3349	2223	1810	1448	1469	950	368	1374	2387	1757	1970	539	699	318
	'45-'42	155	157	89	2664	185	239	19	41	318	232	103	500	375	351	235	224	174	66	158	272	267	353	94	106	80
	'41	710	581	328	11336	955	1701	92	175	1608	1011	379	2430	1852	1314	1047	1005	594	384	941	1911	1533	1406	356	507	314
	'40	370	380	148	7612	567	966	41	91	1035	491	248	1489	1178	831	676	548	306	284	607	1106	941	1047	181	311	209
	Before '40	524	683	272	13168	1407	1528	52	98	1336	791	545	2516	1897	1839	1438	950	442	500	786	1417	1764	2205	329	522	501
	Unid.*	80	20	49	55	23	41	117	25	397	295	9	741	105	162	117	82	133	12	338	75	541	27	67	1	7
	Total	75018	30830	40489	457383	54370	87504	13118	26384	134055	83028	19479	306318	149448	89993	72711	72974	71872	27020	93354	157283	244438	108774	41193	72115	19773

Unid.*—Unidentified as to model year. Data from the Reuben H. Donnelley Corp. are as of July 1, 1958.

For Summaries of Cars and Trucks in Use by Makes, by Model Year, see page 96

AND MODEL YEAR—*continued*

Model	Yr.	Neb.	Nev.	N.H.	N. J.	N.M.	N. Y.	N. C.	N.D.	Ohio	Okla.	Ore.	Pa.	R. I.	S. C.	S. D.	Tenn.	Tex.	Utah	Vt.	Va.	Wash.	W.Va.	Wis.	Wyo.	Totals
MERCURY	'58	719	158	186	2408	424	7141	990	420	5038	642	972	5073	193	524	309	966	3868	470	147	1604	969	557	1159	174	75254
	'57	2137	702	695	9680	1275	24990	3882	1006	19173	3259	2742	16927	762	1989	791	3744	14968	1461	442	4855	3096	3054	5957	600	268385
	'56	2192	803	926	10781	1649	24492	5318	1086	20062	3434	3667	19271	1137	2411	842	4343	16401	1705	461	5500	4166	2810	6245	681	305771
	'55	2586	765	1016	11496	1636	24129	5055	991	19671	4945	3397	17195	1104	2290	1196	4602	18250	1563	447	5052	4499	2255	5828	707	306027
	'54	2312	466	760	12206	1152	22509	3343	750	15349	3631	2225	13142	1141	1518	922	3045	12974	1269	382	4239	3773	1723	4233	516	235426
	'53	2606	602	847	11279	1437	22843	5776	958	17744	4058	2769	16516	1267	2609	1147	4013	15957	1591	443	5098	4707	2294	5307	608	277762
	'52	1566	369	458	5488	865	10687	3046	560	8890	2394	1974	8078	702	1460	665	2182	8223	1081	233	2727	3002	1296	3100	369	147885
	'51	2873	578	713	9815	1299	16781	4865	963	13847	3378	3036	13261	1074	2545	1385	3576	12580	1668	412	4111	4619	2282	5519	630	235804
	'50	2506	497	596	8784	1144	13514	4909	647	10792	3953	2390	11078	960	2915	1239	3178	13088	1356	294	3423	3961	2103	4631	548	208355
	'49	1956	436	409	5719	705	7893	3230	736	7297	2210	2247	7763	737	1907	1116	2331	7332	1094	228	2439	3298	1825	3233	385	140928
	'48	206	62	69	615	94	756	432	79	808	619	209	785	118	317	139	364	1003	98	35	313	381	306	290	51	18410
	'47	362	93	66	915	108	1030	623	133	1108	537	390	1097	131	500	185	533	1168	221	36	394	711	303	429	86	25410
	'46	341	62	41	605	102	670	545	132	631	403	311	755	96	414	172	407	972	179	21	348	590	176	405	52	19193
	'45-'42	33	9	11	40	18	88	33	9	59	37	25	51	10	38	21	27	151	23	2	17	60	9	38	4	2034
	'41	100	32	19	185	59	164	129	48	167	158	144	202	21	130	60	74	392	64	8	67	237	37	159	29	6840
	'40	108	30	14	151	29	150	83	37	165	90	93	171	18	116	37	59	223	46	9	87	180	27	107	26	5423
	Before '40	63	13	13	100	18	121	40	21	106	85	46	101	22	55	30	42	169	24	7	74	128	23	64	8	3471
	Unid.*	29	4	87	50	16	249	6		76	33	4	1039	12	4	7	71	364			24	31	6	1	2	3589
	Total	22695	5681	6926	90317	12030	178207	42305	8576	140983	33866	26641	132505	9505	21742	10263	33557	128083	13913	3587	40372	38408	21086	46705	5476	2285947
NASH	'58																									
	'57	171	64	187	808	90	1511	107	181	1333	251	394	950	468	255	76	339	1298	94	79	378	276	188	912	62	26381
	'56	388	115	505	2040	234	6470	759	284	3508	674	1554	4487	513	308	334	625	1932	330	261	983	1928	544	3985	122	70924
	'55	531	162	629	2948	317	8609	1193	267	5048	870	1707	5822	801	473	399	1121	2572	338	307	1487	2578	780	5490	157	94586
	'54	517	145	423	2899	266	6937	875	272	4603	660	1013	4814	635	384	322	831	2083	297	227	1314	1610	498	3762	204	75571
	'53	735	155	553	4258	368	9366	1329	346	6706	947	1478	7488	952	569	352	1217	2998	522	355	1227	2318	782	5499	184	109196
	'52	875	247	400	4183	453	9043	1763	339	6443	1572	1883	7130	739	1064	431	1781	4968	717	236	1626	2896	958	5849	204	120759
	'51	1291	266	503	5763	661	10367	2335	508	7669	1744	2756	10292	993	1535	667	2077	5341	895	281	2148	4456	1559	8207	307	156490
	'50	837	214	277	2874	370	4483	1124	298	3831	1249	1498	4995	498	746	541	1077	2815	612	96	1036	2668	766	4117	240	83199
	'49	482	118	143	1452	195	2278	533	249	2184	598	946	2765	257	362	285	566	1349	378	69	579	1647	594	2528	142	44499
	'48	314	57	139	1454	122	2146	587	140	1993	403	727	2654	298	327	159	562	1122	247	65	541	1295	441	1950	71	37326
	'47	184	55	73	819	87	1079	322	102	1028	275	523	1170	164	197	100	305	635	146	28	311	850	252	926	46	20839
	'46	143	33	31	432	44	540	183	48	500	163	363	693	86	117	72	169	350	108	17	155	634	145	499	28	12069
	'45-'42	13	2	4	21	5	55	1	12	54	13	50	55	3	8	6	13	32	12	3	4	95	9	96	2	1221
	'41	19	6	7	118	13	114	19	19	148	25	150	204	15	16	18	31	68	18	7	18	251	20	239	13	3281
	'40	15	5	7	74	5	97	11	3	117	22	91	132	11	6	8	15	32	7	1	8	128	14	130	4	2001
	Before '40	45	24	19	156	12	173	16	22	208	43	159	321	32	11	21	40	61	27	20	17	220	26	354	14	4609
	Unid.*	3	24	46	14	1	109		7	39	27	1	405	7	1	7	49	93	1		9	23		2		1767
	Total	6563	1692	3946	30313	3243	63377	11157	3097	45412	9536	15293	54377	6472	6379	3798	10818	27749	4749	2052	11841	23873	7576	44545	1800	864718
OLDSMOBILE	'58	1463	269	271	7290	942	23970	3331	864	11276	1886	1468	12398	714	1274	807	2929	12732	829	279	2816	1515	1376	3968	357	196830
	'57	2325	778	906	13213	1599	36507	6188	1398	23818	4747	3185	21250	1529	2710	1099	4879	23068	1654	534	5672	3782	3093	9073	837	362178
	'56	2546	903	1290	18153	1846	46087	7959	1397	30336	5463	4189	28701	2154	3557	1164	6728	25064	2038	675	7082	5221	3137	10471	824	451578
	'55	3482	1342	1388	20597	2436	51772	10437	1603	34245	7606	5356	33235	2528	4838	1626	8633	33265	2901	654	8885	7706	3471	13507	1076	545663
	'54	2446	730	925	11992	1471	31000	6042	1072	21345	5037	3016	19002	1610	2880	1372	4376	20182	1974	430	5001	4948	1998	8697	705	329292
	'53	2255	701	886	10335	1328	26079	7079	857	19857	3841	3423	19459	1445	3411	1063	4313	16280	1954	582	5048	5845	2134	7775	689	301544
	'52	1449	440	532	6439	931	14858	4712	484	11687	2555	2099	11226	893	2690	710	2667	10138	1222	381	3338	3512	1408	4741	446	180938
	'51	1863	486	708	8771	938	19007	5836	697	12985	2722	2799	13231	1262	3389	959	3336	10138	1424	433	4022	4747	1885	6412	497	220366
	'50	2388	593	928	11429	1080	23810	8161	839	15689	3520	3565	16819	1820	4962	1220	4306	12601	1895	615	5004	6562	2685	8154	569	285455
	'49	1218	359	530	6912	508	13290	3163	461	9304	1834	2162	10047	1213	2138	703	2154	5318	961	349	2587	4256	1614	4826	298	157367
	'48	585	161	246	3376	202	5650	1044	207	4397	845	956	4337	474	598	301	902	2252	389	127	988	2013	737	2018	122	69555
	'47	491	113	180	2242	119	3396	766	126	2880	593	830	3104	328	457	174	660	1519	310	94	716	1763	522	1332	105	48374
	'46	185	60	59	997	50	1241	328	50	888	276	429	1143	139	170	82	234	624	124	37	292	875	159	512	50	19612
	'45-'42	29	10	20	105	9	205	39	8	122	36	82	150	18	20	14	35	157	25	2	36	189	17	79	14	3240
	'41	153	67	68	770	53	1013	264	53	801	227	407	1199	147	159	69	196	554	153	32	217	973	164	506	46	18844
	'40	92	35	60	560	37	684	150	29	540	196	234	818	84	118	49	129	333	110	43	150	582	111	313	27	12340
	Before '40	197	75	107	739	66	894	176	76	813	282	296	1043	110	122	88	155	445	101	66	187	911	129	530	51	17991
	Unid.*	39	4	109	78	22	390	2		108	34	1	1168	17	4	11	123	215	1		38	31	1	5	2	4409
	Total	23206	7126	9213	123998	13637	299853	65677	10221	201091	41700	34497	198330	16485	33497	11511	46755	174885	18065	5333	52079	55431	24641	82919	6715	3225576
PACKARD	'58	5	8	2	67	4	215	17	4	124	5	10	221	3	4	9	8	80	6	1	14	32	13	20	2	1669
	'57	51	6	15	216	15	605	57	22	348	54	41	439	17	12	23	45	161	16	7	79	88	111	116	9	4654
	'56	200	85	70	1233	77	2496	373	101	1903	227	265	2837	139	79	67	201	630	96	36	520	356	386	734	57	25853
	'55	424	183	143	2412	190	5196	592	168	3646	464	437	4465	266	256	249	546	1511	226	74	927	863	432	1172	141	49904
	'54	196	57	82	1729	94	2872	363	84	2088	212	195	2967	129	169	101	340	749	105	70	535	445	307	571	70	28057
	'53	454	223	188	4235	261	8021	1275	180	5841	629	770	6996	405	565	286	903	2646	394	171	1388	1343	798	1636	141	78249
	'52	324	159	129	2520	242	4293	907	155	3425	545	800	4107	229	419	229	636	2214	356	125	1009	969	622	1070	134	50910
	'51	631	217	169	3500	257	5957	1103	240	4353	554	1063	5720	406	662	424	922	2421	438	175	1364	1772	809	1714	184	70494
	'50	394	104	104	1956	181	3127	780	143	2489	492	653	3458	238	401	263	477	1282	291	91	847	1004	460	1161	121	41487
	'49	473	123	133	1965	189	3324	798	161	2498	522	697	4057	182	412	310	536	1396	245	123	879	1129	565	1122	144	44453
	'48	242	111	87	1507	93	2274	497	61	1565	389	535	2844	169	263	109	357	947	164	69	547	998	328	610	61	31320
	'47	87	41	29	469	42	635	133	12	449	146	174	791	45	114	27	149	275	73	17	173	329	112	133	26	9777
	'46	50	21	14	264	23	275	74	10	189	75	105	433	44	63	14	62	165	41	10	94	255	60	66	18	5395
	'45-'42	20	9	4	77	8	96	14	4	67	16	48	137	9	19	3	28	59	13	1	30	121	16	27	8	1978
	'41	32	30	27	252	23	288	57	6	206	48	105	460	39	52	4	58	106	27	15	103	229	47	65	5	5325
	'40	27	28	19	288	17	306	57	6	179	53	74	446	26	55	7	58	145	28	19	89	205	52	75	15	5094
	Before '40	61	40	29	440	31	505	75	19	393	81	108	662	78	89	21	68	145	54	28	123	282	71	154	22	8940
	Unid.*	7		17	12	5	86	4		36	3	1	409	3	1	1	22	26			9	10	1	9		1024
	Total	3678	1445	1271	23142	1752	40571	7176	1376	29799	4515	6081	41449	2427	3635	2147	5416	14958	2573	1032	8730	10430	5190	10455	1158	464583
PLYMOUTH	'58	1691	253	561	9547	951	23529	3075	1088	12828	1741	1878	17812	1117	1571	857	3062	10905	950	540	4815	1996	1431	3189	404	221240
	'57	3491	1039	1796	27302	2068	61922	9069	2008	41820	5900	4781	48465	2691	4525	1623	7679	31614	2398	1121	11866	6801	6480	10466	923	603491
	'56	3197	825	1550	22344	1527	51412	8453	1561	30180	4686	4159	43636	2245	3963	1270	6736	19590	1567	1018	10331	6183	5687	8048	698	472077
	'55	4300	1010	2059	24256	2264	57006	10544	2041	36226	6241	4960	49318	3838	5274	2029	10503	28454	2261	1339	12808	8045	6230	11482	974	598233
	'54	3039	589	1452	17721	1438	41584	7005	1655	21981	3841	3241	28742	2412	3325	1529	6806	17600	1221	1118	8588	5701	4160	7078	633	379002
	'53	4940	915	1856	20463	2313	45766	11277	2398	32834	7075	5198	41533	2786	5386	2503	10193	27523	2130	1380	11292	8859	5535	11690	1015	549388
	'52	3150	559	1057	11311	1417	24604	6640	1507	17829	4843	3389	23081	1577	3271	1457	5460	15816	1399	786	6862	5361	3423	7098	649	313207
	'51	5123	780	1475	18648	1831	37591	9624	2220	27810	6336	4858	36252	2611	5059	2279	8520	22168	1974	1068	10505	7885	5416	11425	907	474569
	'50	4977	731	1375	17953	1795	35252	9405	2122	25101	6477	5416	34363	2738	5133	2243	8874	23055	2048	904	10191	8719	5153	10878	977	464286
	'49	5054	673	1221	16458	1455	29509	8266	2022	22507	5496	5021	31669	2574	4296	2146	7262	19118	2069	752	9289	8169	5208	9804	881	405917
	'48	2666	407	697	8256	707	12790	3810	1184	11523	3096	2655	14659	1309	2293	1286	3892	9978	1058	421	4788	4708	2675	4629	445	209555
	'47	2268	335	416	6263	536	8695	3095	829	8386	2061	2188	11080	939	1772	1056	2705	7001	829	268	3348	3975	2088	3344	308	152352
	'46	1174	203	192	3194	294	4021	1629	422	3636	1230	1276	5956	461	930	495	1433	3759	441	123	1790	2078	1016	1779	168	78630
	'45-'42	201	53	33	405	43	620	226	89	573	163	374	743	77	179	92	202	679	102	55	292	703	125	267	37	13979
	'41	727	232	186	2400	213	2674	1308	317	3073	698	1461	4423	468	830	280	917	2292	371	133	1408	2822	754	1342	135	65079
	'40	388	147	136	1433	112	1740	664	178	2148	484	903	2565	261	477	162	481	1195	229	88	652	1610	444	859	82	39826
	Before '40	1034	290	226	2032	236	2291	920	342	3649	1001	1550	4837	389	746	364	700	2245	433	159	973	3035	691	1753	184	68995
	Unid.*	84	3	170	129	34	573	7	4	197	90	9	2644	20	8	11	238	456		1	99	48	2	2	3	8358
	Total	47504	9044	16458	210115	19234	441579	95017	21987	302301	61459	53317	401778	28513	49038	21682	85663	243448	21480	11274	109897	86698	56518	105133	9423	5118184

Unid.*—Unidentified as to model year.

Data from the Reuben H. Donnelley Corp. are as of July 1, 1958.

For Summaries of Cars and Trucks in Use by Makes, by Model Year, see page 96

• TOTAL REGISTRATIONS •

CARS IN USE BY MAKES, STATES,

Model Yr.	Ala.	Ariz.	Ark.	Calif.	Colo.	Conn.	Del.	D.C.	Fla.	Ga.	Idaho	Ill.
PONTIAC												
'58	1884	803	871	11308	1337	2295	454	741	3545	3101	773	10169
'57	4250	1926	2248	26681	2900	5391	1312	1610	8441	6326	1281	22497
'56	8575	2472	2675	38193	3463	6646	1200	1881	11122	7122	1537	26367
'55	7817	3098	3900	49090	5284	8037	1305	2634	15697	10273	1985	32037
'54	3554	1304	1775	17807	2553	4852	684	1250	7741	5009	779	17412
'53	5793	2201	2721	32727	3937	6392	909	1375	10288	7199	1154	23348
'52	4095	1543	1816	22574	2778	4039	534	783	6138	4635	908	13257
'51	5169	1945	2045	29894	3676	5256	709	1029	7994	5961	1219	16729
'50	5425	2135	2196	36106	4213	5981	895	1183	8996	5639	1386	18562
'49	2681	1209	1144	22292	2142	3889	407	563	4416	2774	876	9469
'48	1585	808	662	13776	1435	2562	289	294	2844	1804	539	5687
'47	894	554	441	8573	982	1884	172	156	1579	919	353	3210
'46	399	310	211	4006	420	855	76	69	744	427	177	1161
'45-'42	57	77	43	955	108	126	8	10	183	79	44	211
'41	260	262	134	5137	416	691	52	67	548	291	166	700
'40	142	133	89	3046	217	491	19	35	401	205	72	518
Before '40	231	196	119	4502	394	687	37	43	474	270	137	842
Unid.*	37	13	22	34	12	36	76	8	316	226	9	457
Total	49838	20979	23112	326702	36267	60110	9138	13731	91467	62260	13395	202633
STUDEBAKER												
'58	219	99	188	1948	335	490	61	81	652	446	218	2106
'57	520	441	404	5826	655	1029	158	149	1389	737	323	4583
'56	739	860	534	6777	740	1174	206	124	1892	1041	468	4646
'55	1268	916	699	12746	1218	2057	235	370	3476	1814	684	6580
'54	592	450	374	7738	614	1186	183	238	2567	1124	353	3789
'53	1902	1038	869	16902	1295	2291	361	388	4119	2157	621	8455
'52	2290	1182	1171	15474	1580	2196	425	340	3962	2556	906	7811
'51	3091	1561	1368	22815	2293	3095	480	436	5114	3417	1235	9981
'50	3697	2007	1720	31501	2735	3287	636	546	6350	3676	1527	11647
'49	1037	659	406	12467	879	1107	212	155	1825	1083	632	3479
'48	903	768	424	14226	957	1251	149	217	1923	1031	522	3529
'47	450	451	187	8923	604	561	64	80	1006	482	383	1578
'46	56	47	19	1570	42	48	5	5	94	65	56	151
'45-'42	41	31	9	817	45	53	3	2	59	37	31	157
'41	77	102	36	2514	177	169	11	19	193	92	99	399
'40	31	59	21	1608	85	74	3	14	121	46	52	195
Before '40	39	79	27	2245	133	143	4	13	122	58	65	286
Unid.*	15	4	15	14	4	15	17	4	113	92	7	181
Total	16964	10454	8471	166111	14471	20226	3213	3181	34977	19954	8182	69553
WILLYS												
'58	61	48	22	117	341	174	4	12	391	41	70	208
'57	77	81	63	847	438	268	9	23	722	42	193	321
'56	110	90	75	1381	541	219	10	14	650	35	210	338
'55	113	137	95	2006	798	279	19	21	800	90	277	653
'54	148	184	91	1852	620	291	35	28	805	116	263	742
'53	725	406	295	5037	1039	1228	101	103	2305	603	531	2381
'52	704	291	311	4124	769	706	73	100	1803	579	448	1394
'51	535	238	343	2922	1067	760	52	83	1842	400	499	1307
'50	695	300	343	2841	951	794	66	78	1984	368	341	1434
'49	567	207	413	2258	962	544	55	52	1502	397	343	1454
'48	880	258	647	3681	2051	640	28	42	1712	284	675	2491
'47	545	173	366	3559	1541	439	35	26	1384	177	472	1712
'46	385	64	215	4054	1025	461	15	10	937	60	217	1329
'45-'42	241	170	74	3272	411	166	7	3	447	58	169	296
'41	69	33	16	783	39	15		1	78	21	19	49
'40	43	15	14	379	26	12		2	69	18	12	31
Before '40	25	25	10	692	37	24	1		50	16	11	64
Unid.*	21	3	3	9	13	5	2	2	92	17	5	49
Total	5844	2723	3396	39794	12669	7025	512	600	17582	3322	4755	16253
EDSEL												
Total	503	393	223	4898	628	773	127	115	1413	570	225	2906
RAMBLER												
'58	806	644	382	8922	1368	2171	248	299	3021	1090	787	7998
'57	163	424	175	6539	1114	1596	36	182	2129	398	463	5510
Unid.*	8	2	1	19		4	1		14	12	1	41
Total	977	1070	558	15480	2482	3771	285	481	5164	1500	1251	13549
MISC.												
'58	2185	2210	620	41339	2189	6214	581	1487	13489	3588	1093	6198
'57	1935	1694	559	46211	1904	5479	349	1078	10735	2603	633	8051
'56	553	905	193	28740	829	2652	198	567	4067	1054	278	3069
'55	317	454	150	15917	539	1721	98	352	2108	669	115	1576
'54	256	239	76	9113	344	1100	62	250	1413	458	45	1009
'53	253	265	115	11164	335	1104	74	220	1931	536	84	1106
'52	283	273	113	9104	342	1011	85	196	1849	467	83	945
'51	300	253	119	6710	307	1131	73	173	2073	606	100	890
'50	200	120	93	3831	210	633	44	80	1487	506	77	667
'49	129	78	81	1894	126	327	20	38	588	299	49	447
'48	169	111	92	2627	157	572	39	38	644	248	82	672
'47	61	40	24	637	75	87	6	4	298	99	24	135
'46	34	5	6	166	65	31		4	107	47	13	38
'45-'42	23	10	31	148	26	11	2		60	32	7	24
'41	12	13	6	173	13	32	3	2	52	36	6	30
'40	7	2	6	155	11	28	2	2	63	22	10	24
Before '40	41	88	25	1843	210	282	10	24	246	102	31	365
Unid.*	154	65	166	235	131	580	70	72	286	197	118	780
Total	6912	6825	2475	180007	7803	22995	1716	4587	41496	11569	2848	26026

Model Yr.	Ind.	Iowa	Kan.	Ky.	La.	Me.	Md.	Mass.	Mich.	Minn.	Miss.	Mo.	Mont.
PONTIAC													
'58	3773	2162	2300	1663	2681	487	2180	3154	9400	3881	1107	1913	560
'57	9859	4700	4366	3999	6577	1487	5807	7786	17918	5834	2743	7207	1058
'56	11795	4873	4508	4577	8107	1785	6404	10953	19732	6103	3159	7038	1355
'55	16481	7410	8411	5976	8971	2254	7433	13915	31225	8190	4289	12987	1907
'54	7528	3961	3628	3740	4412	1438	5169	9233	14491	4243	2000	5744	718
'53	11645	6074	4820	5755	5589	1819	5506	11801	21461	7611	2856	7854	1156
'52	6720	3539	3319	3818	3701	1110	3556	7078	11428	4746	2044	4792	802
'51	8931	5130	4277	5193	4105	1488	4438	9431	13274	6547	2383	6418	1113
'50	9293	6085	4919	5810	4510	1735	5116	10770	12993	7857	2672	7569	1227
'49	4758	3454	2679	3274	2236	1092	2685	6732	6120	3907	1473	4299	665
'48	3012	2123	1779	1997	1200	942	1702	4297	4527	2695	946	2538	432
'47	1927	1347	1261	1329	695	698	1027	2818	2639	1672	572	1610	256
'46	782	535	472	561	282	280	443	1236	945	731	237	699	80
'45-'42	149	105	100	71	77	33	44	143	179	127	41	106	33
'41	481	406	461	310	206	229	337	816	583	529	173	507	99
'40	308	322	261	202	98	166	261	525	445	388	99	311	48
Before '40	661	652	532	288	146	307	307	673	711	786	125	522	104
Unid.*	85	105	76	70	109	6	140	54	367	33	47	1	4
Total	98188	52983	48169	48633	53702	17354	52555	101415	168438	65880	26961	72115	11617
STUDEBAKER													
'58	1921	489	377	200	325	129	630	483	1218	964	211	442	185
'57	3742	974	833	517	816	422	960	1057	2684	1701	532	1435	377
'56	3601	981	967	575	1031	483	1126	1344	2750	1628	549	1436	417
'55	6332	1881	1551	1161	1905	638	1690	2428	4229	2732	790	2456	734
'54	3372	1165	972	906	1253	442	1441	1797	2504	1536	419	1302	370
'53	7382	2190	1841	1975	2074	752	2060	4110	6242	2746	922	2964	592
'52	5827	2499	2031	2089	2255	722	1839	3610	5378	3624	1465	2949	745
'51	8432	3573	3023	2736	2720	840	2403	4602	6526	4718	1684	3946	952
'50	10005	4183	3579	3015	3527	1022	3012	5743	6016	6216	1880	4938	1305
'49	2292	1407	1137	868	895	300	1236	1570	1597	1827	523	1506	435
'48	2807	1557	1306	823	773	338	888	1555	1470	1765	421	1608	431
'47	1367	985	772	412	368	131	442	567	601	1023	199	938	251
'46	130	89	67	45	36	20	89	56	69	72	27	68	21
'45-'42	119	81	36	22	30	6	16	44	60	99	10	56	23
'41	254	228	138	59	82	41	79	154	147	278	26	181	82
'40	170	133	72	40	38	30	55	73	78	175	24	113	50
Before '40	235	233	109	67	32	52	70	144	174	273	20	132	79
Unid.*	42	30	27	24	30	1	61	11	122	17	21		4
Total	58030	22678	18838	15534	18190	6369	18097	29348	41865	31394	9723	26470	7053
WILLYS													
'58	48	34	104	96	80	125	54	150	187	59	17	82	102
'57	108	48	55	186	137	245	77	464	383	102	77	107	203
'56	100	49	44	215	169	234	100	360	494	159	68	90	289
'55	270	118	119	216	177	259	129	440	595	185	89	157	283
'54	267	144	158	184	188	228	308	575	562	250	76	252	224
'53	1151	501	419	692	526	640	679	1623	1922	773	282	672	495
'52	775	398	409	572	497	332	688	930	1226	411	303	587	416
'51	591	258	346	572	583	420	501	990	901	405	350	524	441
'50	679	318	337	666	559	288	494	938	1101	385	292	728	331
'49	637	432	395	741	630	229	295	693	884	384	350	760	304
'48	797	971	607	1433	940	408	300	756	1627	906	493	1126	647
'47	626	892	504	946	651	373	292	552	1543	674	367	961	571
'46	433	542	320	460	316	306	204	560	1630	526	216	583	271
'45-'42	116	107	124	197	129	158	29	164	226	113	126	164	130
'41	35	18	19	28	15	7	8	20	58	27	33	36	16
'40	29	25	14	13	15	9	2	11	26	23	13	9	9
Before '40	64	29	33	17	22	12	11	15	50	56	11	37	14
Unid.*	18	23	4	12	14	4	22	10	62	2	22	1	
Total	6744	4907	4011	7246	5648	4277	4193	9251	13477	5440	3187	6876	4746
EDSEL													
Total	1631	775	793	651	697	114	589	817	4243	1269	296	662	244
RAMBLER													
'58	2655	1369	1436	723	565	463	1075	4479	5849	3084	336	1086	630
'57	1277	836	825	281	449	623	833	2278	4367	2127	64	891	563
Unid.*	7	47	3	5	4	16	1	6	20	2	4		
Total	3939	2252	2264	1009	1018	1102	1909	6763	10236	5213	404	1977	1193
MISC.													
'58	2644	1055	1728	928	2367	987	3154	8473	8361	2294	682	1505	763
'57	2313	1113	1343	756	1333	1118	2493	5828	7716	1586	487	1760	927
'56	1085	484	531	383	574	534	1149	2955	3450	759	163	835	315
'55	650	221	300	247	327	305	673	1824	1660	309	113	493	115
'54	346	122	212	195	267	183	520	1179	1083	211	81	321	54
'53	498	127	191	249	305	239	456	1264	1272	265	87	509	49
'52	436	144	226	207	268	194	426	1154	944	189	102	638	44
'51	489	118	207	246	254	230	386	1152	1166	171	121	958	54
'50	333	108	141	166	226	149	182	540	731	134	113	223	54
'49	262	132	171	148	172	103	123	306	604	116	92	181	29
'48	421	185	204	171	147	138	127	391	666	268	78	340	37
'47	135	69	51	92	39	49	35	100	245	62	24	77	25
'46	35	16	11	18	20	22	15	39	106	34	10	30	
'45-'42	17	9	3	8	8	25	9	31	38	32	5	19	4
'41	28	22	12	13	3	12	4	31	50	40	5	4	3
'40	24	13	9	15	5	15	3	25	65	21	2	9	3
Before '40	169	148	101	76	34	64	105	323	737	259	34	144	47
Unid.*	353	376	11	370	470	117	593	288	1705	63	117	16	23
Total	10438	4462	5452	4288	6819	4484	10453	25903	30599	6813	2316	8062	2546

Unid.*—Unidentified as to model year.

Data from the Reuben H. Donnelley Corp. are as of July 1, 1958.

For State Totals and Summaries of Cars and Trucks in Use by Makes, by Model Year, see page 96

AND MODEL YEAR—*concluded*

Model Yr.	Neb.	Nev.	N.H.	N. J.	N.M.	N. Y.	N. C.	N.D.	Ohio	Okla.	Ore.	Pa.	R. I.	S. C.	S. D.	Tenn.	Tex.	Utah	Vt.	Va.	Wash.	W.Va.	Wis.	Wyo.	Totals
PONTIAC																									
'58	1137	223	263	5146	809	13670	2495	526	8582	1480	1401	8713	392	1120	615	2020	8545	647	291	2962	1414	1064	2852	296	139206
'57	1932	739	1128	11076	1565	28486	5586	902	22387	3900	3087	20314	1034	2620	902	4679	17620	1407	638	7105	3889	3567	6953	655	316375
'56	2369	929	1263	13802	1824	33806	6861	787	27329	4501	4231	24061	1435	3288	947	4889	20921	1747	705	7771	5198	3442	7437	730	378913
'55	3345	1076	1739	18264	2633	44585	10492	1180	34709	7607	5427	32191	2209	5064	1427	8720	31575	2524	878	9358	7357	4092	10480	1023	518561
'54	2005	410	1160	12799	1105	28678	5201	577	19193	4128	1659	17368	1323	2414	823	4089	15220	1166	571	5090	3125	2173	5864	482	267648
'53	3035	691	1325	16563	1559	35530	8325	1060	26589	4770	3249	23357	1856	3804	1144	6404	18762	1830	760	6990	5273	3367	9135	679	378048
'52	1948	496	797	10088	1069	19350	5537	759	15528	3354	2490	13988	1109	2694	814	4394	12334	1403	413	4301	3925	2233	5353	503	234633
'51	2930	556	1002	13874	1269	25481	6838	1014	20136	3984	3376	19075	1577	3343	1212	5491	14559	1899	588	5473	5475	3089	7568	590	304752
'50	3350	746	1122	15542	1291	27843	7358	1053	20173	4769	4020	21227	1855	3510	1474	5916	15382	2161	637	6138	6238	3380	8771	644	337873
'49	1822	424	653	10723	633	16649	3631	613	10669	2429	2353	11420	1188	1899	830	2933	6862	1279	367	3137	3660	1979	4933	350	186672
'48	1256	280	442	6127	313	8847	2274	438	6922	1552	1633	7198	702	1438	609	1953	3847	805	270	1980	2729	1251	2804	210	116350
'47	913	200	297	4007	238	4869	1720	255	4239	1088	1338	4637	532	1034	399	1145	2507	479	196	1325	2146	869	1789	123	73913
'46	337	98	132	1658	96	1844	795	99	1599	469	633	1776	240	467	154	527	1064	200	75	558	1092	387	768	69	31275
'45-'42	76	23	18	197	20	275	100	20	195	84	123	253	29	75	46	90	267	52	10	70	260	42	130	10	5574
'41	250	86	82	1160	82	1147	478	72	1038	413	720	1447	157	355	103	272	771	219	59	408	1075	175	585	55	25050
'40	146	45	61	794	51	776	314	40	746	244	396	919	113	166	60	154	381	126	49	254	637	153	398	33	15858
Before '40	293	75	115	1137	68	1110	310	81	1239	449	467	1455	160	219	124	229	597	141	73	310	925	186	795	53	24357
Unid.*	38	3	127	90	17	338	5	1	119	67	4	1403	19	5	9	115	289	.....	1	54	37	1	2	1	5088
Total	27182	7100	11726	143048	14642	293284	68320	9477	221392	45288	36607	210802	15930	33513	11692	54020	171503	18085	6581	63284	54455	31450	76617	6506	3360146
STUDEBAKER																									
'58	191	59	95	921	141	2887	396	142	1416	227	306	1866	68	134	135	325	1314	84	96	491	337	245	606	50	26849
'57	481	205	321	2436	299	5510	955	326	3493	734	935	4449	178	395	311	693	2376	273	208	1092	987	895	1580	115	61511
'56	442	324	339	2346	315	5201	1127	262	3386	784	1129	4732	334	489	265	846	3057	248	183	1094	1204	708	1557	134	66295
'55	883	513	422	3720	646	7595	1820	373	5814	1237	1634	6659	595	865	410	1496	5526	403	291	2217	2023	1048	2307	195	109280
'54	542	302	349	2489	302	5189	919	204	3361	922	857	3185	385	394	310	802	3086	240	175	1300	1374	540	1350	93	65357
'53	1140	344	481	5483	707	10918	2399	446	8309	1552	1482	8060	813	1201	545	2073	6550	596	238	2410	2537	1020	3581	215	139348
'52	1434	364	433	5158	802	9946	3042	596	8039	1890	1785	8660	699	1701	634	2410	7988	812	257	2766	2921	1236	3804	260	142563
'51	2028	435	597	7003	998	11524	3916	705	9587	2264	2777	10447	893	2285	931	3149	9984	1201	281	3344	4614	1773	5318	352	187427
'50	2456	621	588	8328	1212	12213	4366	851	10023	2983	3190	11736	1116	2608	1139	3716	13096	1713	290	3764	5735	1828	6062	417	223821
'49	787	243	185	2651	322	3757	1243	336	2875	1126	1347	4169	345	718	386	995	3159	643	133	1179	2482	664	1919	207	71405
'48	933	255	158	2674	306	3424	1263	332	2916	911	1774	4395	401	743	431	946	3149	654	100	1243	2866	611	1664	157	73948
'47	641	150	49	1297	186	1258	660	201	1143	634	1108	1927	157	383	262	490	1744	333	36	569	1810	258	835	103	39139
'46	70	23	8	108	26	124	62	20	116	103	132	168	12	50	18	44	242	35	3	60	206	22	49	10	4657
'45-'42	45	16	9	63	11	106	33	12	85	30	105	104	13	25	16	35	149	28	4	32	240	10	65	10	3133
'41	154	42	17	234	42	259	90	38	294	92	285	527	38	64	37	86	348	92	12	113	568	63	230	23	9385
'40	71	23	12	142	20	141	57	27	154	68	143	307	25	54	36	47	163	60	8	65	272	45	123	18	5441
Before '40	134	43	16	265	21	237	74	24	321	111	194	547	41	42	35	51	254	82	18	76	411	72	232	10	8145
Unid.*	23	2	61	26	10	147	4	.....	63	19	.....	441	11	.....	2	54	104	.....	.....	13	13	.....	1	.....	1865
Total	12455	3964	4140	45344	6366	80436	22426	4895	61395	15687	19183	72379	6124	12151	5903	18258	62269	7497	2333	21828	30600	11038	31283	2369	1239669
WILLYS																									
'58	53	20	24	147	113	615	27	5	281	10	263	407	9	3	18	59	273	43	124	159	85	101	96	79	5641
'57	42	39	101	186	127	911	37	23	497	19	449	911	31	11	22	98	336	87	202	215	181	163	131	164	10259
'56	32	60	188	192	155	766	30	46	536	15	584	1099	32	11	22	122	376	127	250	227	265	163	161	170	11673
'55	82	98	158	338	236	1183	165	41	1018	74	640	1227	54	42	71	194	449	211	203	314	371	228	259	288	16267
'54	102	64	153	546	152	1529	201	40	874	75	635	1008	81	83	98	161	484	212	164	353	392	193	386	200	16759
'53	296	171	370	2293	324	5243	1108	117	3359	234	1224	3127	209	446	164	691	1249	350	465	813	1004	727	928	331	50372
'52	311	122	193	1600	261	2970	1030	102	2237	287	1068	2315	151	429	142	550	1402	334	244	725	859	595	649	244	37676
'51	234	110	239	1430	301	2630	412	131	1844	211	1197	2173	167	187	130	518	1455	271	348	612	851	460	494	338	33673
'50	200	94	186	1441	326	2475	483	117	1632	295	869	2730	172	247	106	622	1625	234	252	526	766	578	470	271	33928
'49	283	73	126	1251	248	1833	474	127	1557	338	543	1534	162	277	90	666	1495	224	154	628	675	475	421	214	29356
'48	490	75	149	997	396	1839	330	367	2183	324	1042	2388	146	197	92	950	2186	427	273	880	981	241	634	439	42426
'47	382	76	109	785	340	1241	220	258	1653	288	656	1778	113	119	53	636	1570	325	246	704	868	191	499	359	32850
'46	233	49	132	714	248	1174	70	167	1466	87	418	2080	86	22	8	314	904	170	249	499	511	26	329	170	25265
'45-'42	53	61	58	290	164	574	4	35	323	48	311	257	52	10	3	155	400	254	58	238	927	6	77	61	11516
'41	11	8	5	52	9	45	18	18	63	22	74	429	6	7	7	19	53	22	1	22	84	4	10	12	2424
'40	5	6	5	23	5	37	10	6	47	16	72	48	2	11	7	23	51	2	2	12	56	13	24	2	1304
Before '40	20	9	6	45	7	35	18	15	93	35	40	79	6	18	8	11	65	6	3	7	77	6	35	5	1984
Unid.*	9	3	21	16	13	51	3	.....	39	6	1	309	4	.....	3	29	35	.....	2	7	3	.....	.....	1	970
Total	2838	1138	2223	12344	3425	25151	4640	1615	19702	2384	10086	23899	1463	2120	1044	5818	14408	3309	3240	6941	8956	4170	5603	3348	364343
EDSEL																									
Total	313	148	96	1682	304	3647	645	251	2913	404	659	2343	163	306	135	616	2185	264	55	884	665	574	918	144	45869
RAMBLER																									
'58	689	59	410	3583	430	8360	1061	534	4330	701	1807	5662	704	579	473	1079	2292	469	400	1407	1580	444	4624	227	93390
'57	396	56	523	2231	258	6724	892	350	3146	716	1351	4663	260	166	404	448	1304	297	325	983	1942	569	4222	149	66518
Unid.*	.....	22	19	6	2	49	2	14	35	18	2	45	1	.....	4	7	13	.....	.....	2	3	4	.....	.....	466
Total	1085	137	952	5820	690	15133	1955	898	7511	1435	3160	10370	965	745	881	1534	3609	766	725	2392	3525	1017	8846	376	160374
MISC.																									
'58	725	494	931	7619	961	23756	1836	287	7074	1191	4460	3100	1216	1188	274	1494	6731	1159	870	3919	4371	884	2053	360	193287
'57	450	573	1301	6595	1049	23032	1483	245	6483	1612	3909	927	1087	864	248	1136	5698	1015	748	3082	5870	1131	2334	221	181097
'56	151	333	558	3304	416	12732	695	60	3202	533	2053	454	543	444	106	484	2064	532	248	1582	3081	374	1142	88	91501
'55	112	180	270	1822	243	6624	365	28	1683	327	791	281	324	262	47	340	1426	247	104	914	1355	171	597	42	49808
'54	61	101	171	1222	142	4753	255	14	1199	183	345	151	234	189	43	219	944	71	65	661	793	102	312	18	31387
'53	83	123	164	1448	154	5611	296	25	1595	200	452	151	268	191	26	295	1101	125	78	650	1025	117	337	19	37241
'52	66	95	149	1327	160	3869	367	23	1318	271	519	220	239	290	25	362	1090	138	74	645	895	141	283	32	32321
'51	100	84	126	1360	141	4227	432	17	1264	217	540	334	210	351	32	425	952	78	57	682	1073	165	231	29	31400
'50	66	34	91	849	133	3165	321	33	951	154	358	275	158	212	31	294	906	40	31	362	965	142	172	22	20813
'49	53	30	60	495	83	1678	169	19	574	156	130	293	80	105	32	182	710	52	13	211	364	98	172	16	12290
'48	83	31	69	872	75	1427	243	35	791	195	233	308	121	193	56	203	995	26	32	301	468	81	181	29	15673
'47	39	15	20	105	21	379	69	15	236	70	40	178	21	53	19	73	283	3	6	80	93	34	54	7	4406
'46	14	13	5	30	12	154	29	6	52	20	10	39	15	13	8	46	102	4	2	37	29	8	26	7	1543
'45-'42	4	10	2	32	6	74	14	4	34	6	10	19	6	4	1	46	105	2	3	41	34	2	24	6	1071
'41	5	14	4	9	9	87	15	2	59	22	11	79	13	6	5	17	66	2	2	20	89	6	41		1188
'40	7	7	4	19	3	85	7	4	53	20	13	34	8	11	2	19	45	2	1	14	23	6	14	2	944
Before '40	55	54	30	298	31	449	64	28	472	123	86	445	92	40	14	45	254	28	18	99	260	100	174	42	8809
Unid.*	149	28	1314	305	225	9965	764	2	567	197	42	25747	66	.....	12	429	812	3	1	27	150	21	10	6	48198
Total	2224	2219	5269	27711	3864	102067	7424	847	27607	5497	14000	33035	4701	4416	967	6109	24286	3527	2353	13338	20938	3583	8157	946	762977

Unid.*—Unidentified as to model year.

Data from the Reuben H. Donnelley Corp. are as of July 1, 1958.

For State Totals and Summaries of Cars and Trucks in Use by Makes, by Model Year, see page 96

Summary of Passenger Cars in Use, by States

As of July 1, 1958

Based on data from the Reuben H. Donnelley Corp.

State	Units	% of Total	State	Units	% of Total	State	Units	% of Total
Alabama	843,743	1.60	Maine	258,988	.49	Oklahoma	731,608	1.39
Arizona	357,904	.68	Maryland	785,064	1.50	Oregon	608,920	1.16
Arkansas	403,591	.77	Massachusetts	1,450,906	2.76	Pennsylvania	3,275,977	6.24
California	5,409,897	10.32	Michigan	2,594,680	4.94	Rhode Island	254,979	.49
Colorado	619,413	1.18	Minnesota	1,126,495	2.15	South Carolina	599,913	1.14
Connecticut	841,865	1.60	Mississippi	439,202	.84	South Dakota	221,990	.42
Delaware	128,421	.24	Missouri	1,189,482	2.27	Tennessee	875,700	1.67
District of Columbia	190,093	.36	Montana	220,634	.42	Texas	2,862,267	5.45
Florida	1,543,919	2.94	Nebraska	490,110	.93	Utah	264,203	.50
Georgia	981,534	1.87	Nevada	105,501	.20	Vermont	108,590	.21
Idaho	222,477	.42	New Hampshire	172,258	.33	Virginia	1,003,369	1.91
Illinois	3,061,889	5.83	New Jersey	1,945,527	3.71	Washington	939,127	1.79
Indiana	1,497,423	2.85	New Mexico	237,367	.45	West Virginia	511,760	.97
Iowa	917,602	1.75	New York	4,086,777	7.79	Wisconsin	1,208,982	2.30
Kansas	790,127	1.51	North Carolina	1,103,955	2.10	Wyoming	113,450	.22
Kentucky	791,586	1.51	North Dakota	205,879	.39			
Louisiana	806,456	1.54	Ohio	3,090,909	5.90	Total	52,492,509	100.00

Passenger Cars in Use by Makes and by Model Year

As of July 1, 1958

Based on Data from The Reuben H. Donnelley Corp.

Model Year	Buick	Cadillac	Chevrolet	Chrysler	De Soto	Dodge	Ford	Hudson	Kaiser-Frazer	Lincoln	Mercury	Nash	Oldsmobile	Packard	Plymouth	Pontiac	Studebaker	Willys	All Others	Total
1958	171,853	78,065	773,449	45,306	28,769	78,744	603,828	......	......	18,225	75,254	......	196,830	1,669	221,240	139,206	26,949	5,641	332,545	2,797,573
1957	381,041	134,138	1,419,572	139,283	108,090	266,885	1,552,587	4,489	......	37,921	268,365	26,381	362,178	4,654	603,491	316,375	61,511	10,259	247,615	5,994,835
1956	531,083	140,028	1,472,149	122,969	102,126	221,894	1,352,689	24,701	156	47,165	305,771	70,924	451,578	25,853	472,077	378,913	66,295	11,673	91,501	5,889,545
1955	689,642	127,503	1,621,674	147,026	106,739	258,891	1,337,788	38,398	502	25,518	306,027	94,586	545,663	49,904	598,233	518,561	109,280	16,267	49,808	6,642,010
1954	410,631	86,368	1,095,889	92,640	69,041	149,429	1,082,450	41,986	7,295	33,433	235,426	75,571	329,292	28,057	379,002	267,648	65,357	16,759	31,387	4,497,661
1953	438,202	95,775	1,261,145	147,077	115,139	274,365	1,135,926	54,489	35,158	36,517	277,762	109,196	301,544	78,249	549,388	378,048	139,348	50,372	37,241	5,514,941
1952	263,640	78,599	761,756	79,124	73,074	197,573	585,166	52,997	37,990	23,873	147,885	120,759	180,938	50,910	313,207	234,633	142,563	37,676	32,321	3,414,684
1951	327,554	91,604	1,086,084	116,137	81,912	225,072	807,978	84,870	107,804	23,892	235,804	156,490	220,366	70,494	474,569	304,752	187,427	33,673	31,400	4,667,882
1950	479,757	86,533	1,141,303	138,512	105,815	281,020	898,252	64,093	7,784	18,822	208,355	83,199	285,455	41,487	464,286	337,873	223,821	33,928	20,813	4,921,108
1949	172,670	70,593	755,082	100,317	77,109	212,437	587,332	59,122	23,863	26,698	140,928	44,499	157,367	44,453	405,917	186,672	71,405	29,356	12,290	3,178,110
1948	86,693	34,420	442,790	61,531	47,617	125,687	112,564	25,885	23,274	2,518	18,410	37,326	69,555	31,320	209,555	116,350	73,948	42,426	15,673	1,577,542
1947	68,022	29,795	331,787	39,005	30,524	98,788	151,358	12,440	12,318	2,969	25,410	20,839	48,374	9,777	152,352	73,913	39,139	32,850	4,406	1,184,066
1946	27,650	11,268	150,241	21,222	17,489	51,052	126,708	8,151	......	1,416	19,193	12,069	19,612	5,395	78,630	31,275	4,657	25,265	1,543	612,836
'45-'42	5,063	2,915	34,364	2,422	1,741	7,991	25,736	1,283	......	401	2,034	1,221	3,240	1,978	13,979	5,574	3,133	11,516	1,071	125,662
1941	28,777	12,490	158,994	16,309	8,922	23,794	63,523	3,143	......	1,336	6,840	3,281	18,844	5,325	65,079	25,050	9,385	2,424	1,188	454,704
1940	23,075	4,702	101,826	8,414	6,114	19,819	60,977	2,108	......	875	5,423	2,001	12,340	5,094	39,826	15,858	5,441	1,304	944	316,141
Earlier	32,283	7,136	173,783	11,146	8,058	37,008	201,743	3,893	......	1,450	3,471	4,609	17,991	8,940	68,995	24,357	8,145	1,984	8,809	623,801
Unid.*	5,603	1,801	19,438	2,115	1,398	3,943	15,946	952	1,988	490	3,589	1,767	4,409	1,024	8,358	5,088	1,865	970	48,665	129,408
Totals	4,143,239	1,093,733	12,801,326	1,290,555	989,677	2,534,392	10,702,550	483,000	258,132	303,519	2,285,947	864,718	3,225,576	464,583	5,118,184	3,360,146	1,239,669	364,343	969,220	52,492,509

Unid.*—Unidentified as to model year.

Trucks in Use by Makes and by Model Year

As of July 1, 1958

Based on Data from The Reuben H. Donnelley Corp.

Model Year	Autocar	Brockway	Chevrolet	Diamond T	Divco	Dodge, Plymouth	Federal	Ford	G.M.C.	International	Mack	Reo	Studebaker	White-Sterling	Willys	All Others	Total
1958		446	144,670	1,820	1,283	21,680	55	115,829	26,917	47,863	5,505	657	3,030	5,608	8,065	12,391	395,829
1957		857	259,672	3,241	2,542	51,245	43	222,285	56,557	87,279	12,460	2,234	6,517	11,293	11,240	15,447	742,912
1956		915	214,881	3,475	3,263	55,904	45	331,285	83,816	97,761	12,107	2,644	7,588	13,410	9,272	12,033	848,399
1955		1,093	371,702	3,139	3,276	60,483	48	254,568	67,118	96,764	9,703	2,563	12,444	12,027	9,896	9,339	914,163
1954	1,006	1,393	247,538	2,345	2,655	52,411	245	198,722	49,640	77,003	5,799	2,036	5,220	9,431	7,272	6,639	669,355
1953	1,413	1,657	275,027	2,724	2,710	78,648	558	230,148	81,668	75,688	5,429	2,881	23,924	9,458	12,717	7,298	811,948
1952	1,126	1,310	240,528	2,589	2,761	88,368	550	173,835	66,600	88,432	5,431	2,410	24,519	8,507	10,105	6,838	723,909
1951	1,651	1,726	331,151	3,128	3,760	77,718	629	225,049	75,984	84,145	7,241	2,273	28,311	9,425	18,003	8,174	878,368
1950	1,295	1,647	344,656	3,184	4,308	91,838	605	262,771	86,543	70,565	6,128	1,960	30,018	8,487	14,416	7,610	936,031
1949	1,028	880	278,111	2,741	3,225	87,475	535	159,786	55,381	72,558	4,011	2,126	55,084	4,803	16,147	6,630	750,521
1948	1,543	1,447	222,515	5,118	4,902	78,843	1,221	163,895	51,275	80,035	5,316	5,106	15,940	6,329	29,546	6,789	679,820
1947	2,156	1,744	131,795	4,141	4,386	67,025	1,582	102,698	28,628	68,272	6,347	3,407	21,544	6,347	12,363	7,508	467,943
1946	1,944	1,393	150,260	1,660	2,943	55,611	904	91,045	12,413	43,457	1,970	2,673	12,362	3,885	9,211	5,427	397,158
1945	917	619	15,652	959	1,029	8,843	423	19,506	5,200	12,916	1,779	853	1,246	2,201	1,185	2,155	75,483
1944	413	271	6,044	376	166	2,656	241	6,811	2,340	5,943	860	187	551	920	516	940	29,235
1943	126	22	1,377	129	68	1,100	136	4,432	1,360	1,793	187	108	200	381	517	441	12,377
1942	487	59	34,895	400	388	12,773	196	24,122	8,189	10,166	678	406	672	949	1,549	1,391	97,320
1941	615	279	66,089	991	1,156	23,996	128	44,924	11,311	23,407	2,029	245	1,524	1,483	611	2,280	181,068
1940	283	141	43,199	712	587	14,642	109	30,080	7,069	12,675	1,271	66	311	558	428	1,673	113,804
Earlier	780	367	94,622	2,540	760	35,472	365	110,561	12,089	27,810	2,910	1,007	1,271	1,921	569	7,890	300,934
Unid*	615	63	7,858	203	99	2,128	37	6,897	2,098	2,730	302	111	557	467	499	5,326	29,990
Totals	17,408	18,329	3,482,242	45,615	46,267	968,869	8,655	2,779,249	790,186	1,087,262	97,463	35,953	252,833	117,890	174,127	134,219	10,056,567

Unid.*—Unidentified as to model year.

1958 Motor Vehicle Registrations in 115 Leading Counties

Data from R. L. Polk & Co. are as of July 1, 1958

STATE	COUNTY	PRINCIPAL CITY	PASSENGER CARS	TRUCKS
Alabama	Jefferson	Birmingham	179,148	25,712
	Mobile	Mobile	85,157	13,435
Arizona	Maricopa	Phoenix	191,950	44,198
California	Alameda	Oakland	313,880	43,773
	Contra Costa	Richmond	135,762	19,023
	Fresno	Fresno	121,147	33,105
	Los Angeles	Los Angeles	2,308,258	301,085
	Orange	Santa Ana	212,147	29,714
	Sacramento	Sacramento	160,749	32,274
	San Bernardino	San Bernardino	164,972	30,985
	San Diego	San Diego	302,713	42,974
	San Francisco	San Francisco	236,887	50,386
	San Mateo	San Mateo	150,194	18,195
	Santa Clara	San Jose	204,097	33,175
Colorado	Denver	Denver	199,529	28,568
Connecticut	Fairfield	Bridgeport	243,856	23,986
	Hartford	Hartford	208,896	26,348
	New Haven	New Haven	209,716	26,248
Florida	Dade	Miami	339,008	38,884
	Duval	Jacksonville	128,805	19,800
	Hillsborough	Tampa	126,586	23,157
	Pinellas	St. Petersburg	130,828	13,555
Georgia	Chatham	Savannah	49,372	7,766
	De Kalb	Atlanta	55,478	6,285
	Fulton		187,250	31,984
Illinois	Cook	Chicago	1,406,882	114,499
Indiana	Allen	Fort Wayne	75,184	11,797
	Lake	Gary	150,932	19,178
	Marion	Indianapolis	233,866	37,881
	St. Joseph	South Bend	79,454	10,738
	Vanderburgh	Evansville	54,076	9,017
Iowa	Polk	Des Moines	85,788	13,216
Kansas	Sedgwick	Wichita	132,153	20,588
	Wyandotte	Kansas City	67,288	9,423
Kentucky	Jefferson	Louisville	183,654	24,727
Louisiana	Caddo Parish	Shreveport	68,955	13,752
	East Baton Rouge	Baton Rouge	70,812	11,945
	Orleans Parish	New Orleans	142,468	19,734
Maryland	Baltimore City	Baltimore	284,090	33,255
	Baltimore County		80,599	9,201
Massachusetts	Bristol	Fall River-New Bedford	115,724	14,184
	Essex	Lynn	165,241	16,741
	Hampden	Springfield	126,401	14,826
	Middlesex	Cambridge	350,316	32,903
	Norfolk	Quincy	157,134	12,483
	Suffolk	Boston	160,764	24,928
	Worcester	Worcester	170,518	21,365
Michigan	Genesee	Flint	126,103	13,485
	Kent	Grand Rapids	122,437	16,885
	Oakland	Pontiac	236,525	20,940
	Wayne	Detroit	870,681	82,548
Minnesota	Hennepin	Minneapolis	280,023	31,342
	Ramsey	St. Paul	143,431	18,505
Missouri	Clay-Jackson	Kansas City	202,630	30,025
	St. Louis City	St. Louis	266,345	35,552
	St. Louis County		136,036	13,612
Nebraska	Douglas	Omaha	105,906	14,490
New Jersey	Bergen	Hackensack	274,397	23,881
	Camden	Camden	114,423	12,721
	Essex	Newark	294,403	38,486
	Hudson	Jersey City	153,754	18,804
	Mercer	Trenton	86,731	12,339
	Middlesex	New Brunswick	137,450	15,164
	Passaic	Paterson	133,657	15,450
	Union	Elizabeth	182,890	16,428
New York	5 Boroughs	New York	1,268,979	113,599
	Albany	Albany	77,267	11,281
	Erie	Buffalo	313,803	31,727
	Monroe	Rochester	181,108	16,317
	Nassau	Hempstead	453,504	30,230
	Onondaga	Syracuse	125,592	14,408
	Suffolk	Kings Park	202,425	20,333
	Westchester	Yonkers	276,482	20,579
New Mexico	Bernalillo	Albuquerque	70,860	13,605
North Carolina	Mecklenburg	Charlotte	79,888	14,439
Ohio	Cuyahoga	Cleveland	536,450	43,237
	Franklin	Columbus	214,193	27,359
	Hamilton	Cincinnati	249,884	25,873
	Lucas	Toledo	151,356	145,590
	Montgomery	Dayton	172,584	16,706
	Stark	Canton	115,082	14,432
	Summit	Akron	168,818	17,125
	Trumbull	Youngstown	65,914	6,809
	Mahoning		94,590	9,902
Oklahoma	Oklahoma	Oklahoma City	153,956	30,670
	Tulsa	Tulsa	124,967	24,432
Oregon	Multnomah	Portland	195,624	28,342
Pennsylvania	Allegheny	Pittsburgh	450,012	49,295
	Delaware	Chester	166,176	11,575
	Erie	Erie	79,595	10,246
	Lackawanna	Scranton	63,312	9,839
	Luzorne	Wilkes-Barre	100,967	15,002
	Montgomery	Norristown	173,015	19,597
	Philadelphia	Philadelphia	443,053	56,796
	Westmoreland	North Kensington	99,150	13,850
Rhode Island	Providence	Providence	173,038	23,208
Tennessee	Davidson	Nashville	113,816	15,288
	Hamilton	Chattanooga	64,964	10,316
	Knox	Knoxville	69,541	10,493
	Shelby	Memphis	155,370	21,655
Texas	Bexar	San Antonio	182,527	28,969
	Dallas	Dallas	313,760	50,205
	El Paso	El Paso	73,198	11,949
	Harris	Houston	395,549	68,167
	Nueces	Corpus Christi	67,596	13,648
	Tarrant	Fort Worth	187,869	29,415
	Travis	Austin	58,649	11,535
Utah	Salt Lake	Salt Lake City	119,665	20,654
Virginia	Henrico	Richmond	108,626	19,974
	Norfolk	Norfolk	120,150	14,346
Washington	King	Seattle	315,034	46,464
	Pierce	Tacoma	100,849	16,592
	Spokane	Spokane	68,291	16,999
Wisconsin	Milwaukee	Milwaukee	301,384	29,433
Dist. of Columbia		Washington	190,093	20,224
Total of 115 Counties			24,953,678	3,103,382
Total U. S. as of July 1, 1958			52,492,509	10,056,567
Per Cent in Leading Counties			47.54%	30.9%

U. S. Exports of Automotive Products, 1956-1958

Vehicles, Engines, Parts and Equipment

1958 Data Compiled by Automobile Manufacturers Association, from records of Bureau of the Census
All Other Years by Automotive Industries, from records of the Bureau of the Census

	1958		1957		1956	
	Number	Value	Number	Value	Number	Value
VEHICLES						
Passenger Cars and Chassis, New	121,758	$258,338,725	141,969	$299,423,859	174,895	$332,808,705
Passenger Cars and Chassis, Used	10,238	7,939,279	8,698	7,137,998	8,196	7,177,200
Trucks, Buses and Chassis, New	146,334	293,800,320	192,157	433,803,413	195,986	440,308,407
Trucks, Buses and Chassis, Used	4,005	5,551,904	5,156	7,931,542	4,218	7,282,820
Special Purpose Vehicles, New	1,265	10,273,104	1,825	13,428,848	1,561	10,007,058
Special Purpose Vehicles, Used	......	....	291	767,587	297	768,521
Trailers	7,584	15,503,942	9,035	20,302,792	9,880	20,964,893
Motorcycles	1,073	1,094,811	1,256	1,198,995	1,202	1,393,210
Total—New and Used Vehicles	**292,257**	**$592,502,086**	**360,387**	**$783,995,034**	**396,235**	**$820,710,814**
ENGINES						
Diesel, Truck and Bus, for Assembly			488	$2,042,427	255	$549,402
Gasoline, Truck and Bus, for Assembly	8,257	$2,670,029	5,215	2,510,975	18,313	5,781,450
Passenger Car, for Assembly			8,866	1,436,827	18,924	3,144,143
Diesel, for Replacement	23,571	8,644,823	1,729	3,908,067	2,118	5,314,942
Gasoline, for Replacement			20,205	4,677,764	23,970	5,761,952
Total—Engines	**31,828**	**$11,314,852**	**36,503**	**$14,576,060**	**63,580**	**$20,551,889**
PARTS FOR ASSEMBLY						
Bodies, Truck and Bus	3,375	3,349,810	2,749	$3,464,798	4,484	$3,719,673
Bodies, Passenger Car			124	67,490	378	151,502
Parts, for Cars, Trucks and Buses	......	195,802,077	....	220,298,525	....	234,752,990
Total—Parts for Assembly	......	**$199,151,887**	....	**$223,830,813**	....	**$238,624,165**
PARTS FOR REPLACEMENT						
Bodies, Truck and Bus	......	$...........	753	$650,363	922	$909,603
Trailer Parts	......	5,062,223	....	5,242,164	....	4,805,900
Motorcycle Parts	......	372,873	....	397,314	....	428,267
Springs, Leaf and Leaves, lb.	......	2,606,063	17,116,594	3,845,341	20,060,204	4,136,035
Shock Absorbers and Parts	......	4,415,858	....	4,155,947	....	3,520,540
Instruments for Motor Vehicles	......	....	....	1,203,551	....	1,153,343
Parts for Cars, Trucks, and Buses, n.e.c.	......	246,726,430	....	245,975,775	....	240,865,145
Heaters, Air Conditioners, and Parts	......	1,144,796	....	1,486,048	....	1,711,122
Accessories and Parts	......	6,446,048	....	7,602,753	....	6,172,717
Spark Plugs	23,068,917	7,141,002	24,186,041	7,327,221	23,370,659	7,060,950
Starting, Lighting and Ignition Equipment	......	29,597,014	....	30,758,489	....	30,682,332
Batteries, Storage, 6 and 12 volt	221,580	3,281,251	271,473	3,930,274	360,701	5,205,739
Clutch Facings, Asbestos			1,350,181	1,044,234	1,160,166	910,820
Brake Linings, Asbestos, ft.	......	5,704,094	2,289,119	924,663	2,166,761	931,284
Brake Lining, Asbestos, lb.			4,906,354	4,192,870	5,013,097	4,449,267
Total—Replacement Parts	......	**$312,497,652**	....	**$318,737,007**	....	**$312,943,064**
GARAGE EQUIPMENT						
Service Appliances and Parts	......	$13,903,386	....	$14,244,626	....	$14,471,183
Pumps, Measuring and Dispensing	29,927	6,403,332	27,662	6,564,050	31,967	7,211,447
Lubrication Equipment and Parts	......	6,264,144	....	7,234,269	....	7,258,088
Total—Garage Equipment	......	**$26,570,862**	....	**$28,042,945**	....	**$28,940,718**
TIRES AND TUBES						
Casings, Truck and Bus			860,387	$53,021,467	936,615	$53,626,829
Casings, Pass. Car, Motorcycle, and n.e.c.	......	$75,320,168	1,012,290	11,541,170	901,109	10,386,621
Casings, Off-Road Vehicles, excl. Tractors			177,173	24,871,133	156,315	20,572,095
Tubes, Inner, Passenger Cars and n.e.c.	......	3,745,466	530,631	1,591,764	351,623	621,897
Tubes, Inner, Truck and Bus			548,118	2,626,314	534,756	2,289,405
Tires, Solid & Cushion; Truck, Ind.; n.e.c.	......	....	57,237	586,889	23,737	565,137
Camelback, lb.	......	....	9,282,791	2,786,667	8,666,425	2,687,087
Tire Sundries and Repair Materials, lb	......	6,653,759	6,742,741	5,463,231	6,137,186	5,425,424
Total—Tires and Tubes	......	**$85,719,393**	....	**$102,488,635**	....	**$96,174,495**
Total—All Automotive Products	......	**$1,227,756,732**	....	**$1,471,670,494**	....	**$1,517,945,145**

1958 U. S. Automotive Imports

As reported by the Automobile Manufacturers Association from the records of the Bureau of the Census

	Truck and Bus Chassis		New Passenger Cars		Used Passenger Cars		Auto Parts Value	Total Value of Imports
	Number	Value	Number	Value	Number	Value		
Canada	172	$419,800	346	$683,617	189	$158,584	$2,357,289	$3,619,290
Sweden	14	75,508	17,820	21,913,920	12	15,589	1,414,564	23,419,581
United Kingdom	2,009	2,572,928	153,475	193,915,729	1,084	1,629,297	10,232,993	208,350,947
Eire	....	......	1,735	1,605,443	....	......	......	1,605,442
Netherlands	....	......	3	5,868	74	92,800	65,716	164,384
Belgium	....	......	211	238,622	2	1,340	10,869	250,831
West Germany	13,084	14,669,648	134,619	145,986,000	10,985	13,701,680	10,950,551	185,307,879
Germany	....	......	361	349,230	5	5,460	9,873	364,563
France	....	28,537	89,481	86,119,510	317	426,708	3,874,756	90,449,511
Czechoslovakia	....	......	737	534,144	....	......	16,722	550,866
Italy	8	30,960	30,406	33,716,656	187	337,265	1,056,088	35,140,969
Japan	18	24,877	1,604	1,749,870	1	830	214,253	1,989,830
Australia	....	......	1	3,873	....	......	8,245	12,118
Cuba	....	......	....	......	1	750	7,280	8,030
Spain	....	......	2	3,671	4	4,370	161	8,202
Mexico	1	3,042	....	......	....	......	470	3,512
All Other Countries	....	......	7	12,520	....	......	80,652	93,172
Total	**15,330**	**$17,825,300**	**430,808**	**$486,838,673**	**12,861**	**$16,374,673**	**$30,300,482**	**$551,339,128**

1959 . . . U.S. PASSENGER CARS

PRICE • WEIGHT • BODIES•

Following are prices at factory for cars with standard equipment as of January 26, 1959
State or local taxes, transportation and finance charges and optional equipment are extra.

BODY MAKE AND MODEL	List Price at Factory without Federal Taxes	Federal Taxes and Handling Charges	Suggested Price at Factory including Federal Taxes	Shipping Weight
AMERICAN MOTOR CORP.				
RAMBLER				
American-6				
DeLuxe				
Bus. Sedan, 2d.	1662	159	1821	2435
Sedan, 2d......	1675	160	1835	2476
Sta. Wagon, 2d.	1884	176	2060	2554
Super				
Sedan, 2d......	1754	166	1920	2492
Sta. Wagon, 2d.	1963	182	2145	2570
Rambler Six				
DeLuxe				
Sedan, 4d......	1918	180	2098	2934
Sta. Wagon, 4d.	2224	203	2427	3068
Super				
Sedan, 4d......	2071	197	2268	2951
Hardtop, 4d....	2141	202	2343	2961
Sta. Wagon, 4d.	2345	217	2562	3082
Custom				
Sedan, 4d......	2178	205	2383	2956
Sta. Wagon, 4d.	2452	225	2677	3097
Rebel-V8				
DeL. Sedan, 4d.	2039	189	2228	3274
Sup. Sedan, 4d..	2192	206	2398	3287
Sta. Wagon, 4d.	2466	226	2692	3398
Custom				
Sedan, 4d......	2299	214	2513	3295
Hardtop, 4d....	2369	219	2588	3338
Sta. Wagon, 4d.	2573	234	2807	3407
Amb. V8				
Super				
Sedan, 4d......	2369	218	2587	3428
Sta. Wagon, 4d.	2643	238	2881	3546
Custom				
Sedan, 4d......	2504	228	2732	3437
Hardtop, 4d....	2588	234	2822	3483
Sta. Wagon, 4d.	2778	248	3026	3562
Hdt. Sta. Wag..	2862	254	3116	3591
CHRYSLER CORP.				
CHRYSLER				
Windsor				
Sedan, 4d......	2909	230	3139	3800
Hardtop, 2d....	2988	236	3224	3735
Hardtop, 4d....	3048	240	3288	3830
Convertible.....	3296	259	3555	3950
Twn. & Ctry, 2s.	3362	264	3626	4045
Twn. & Ctry. 3s.	3536	277	3813	4070
Saratoga				
Sedan, 4d......	3609	282	3891	4010
Hardtop, 2d....	3665	286	3951	3970
Hardtop, 4d....	3737	292	4029	4035
New Yorker				
Sedan, 4d......	4020	314	4334	4120
Hardtop, 2d....	4068	318	4386	4080
Hardtop, 4d....	4121	322	4443	4165
Convertible.....	4453	347	4800	4270
Twn. & Ctry, 2s.	4553	354	4907	4295
Twn. & Ctry, 3s.	4753	369	5122	4360
300-E				
Hardtop, 2d....	4852	377	5229	4290
Convertible.....	5252	407	5659	4350
DE SOTO				
Firesweep				
Sedan, 4d......	2636	213	2849	3670
Sportsman, 2d..	2695	217	2912	3625
Sportsman, 4d..	2761	222	2983	3700
Convertible.....	3018	242	3260	3840
Sta. Wagon, 2s..	3066	245	3311	3950
Sta. Wagon, 3s..	3198	255	3453	3980
Firedome				
Sedan, 4d......	2933	236	3169	3840
Sportsman, 2d..	3032	244	3276	3795
Sportsman, 4d..	3085	248	3333	3895
Convertible.....	3322	266	3588	4015
Fireflight				
Sedan, 4d......	3415	273	3688	3920
Sportsman, 2d..	3478	278	3756	3910
Sportsman, 4d..	3531	282	3813	3950
Convertible.....	3777	300	4077	4105
Sta. Wagon, 2s..	3836	305	4141	4170
Sta. Wagon, 3s..	3968	315	4283	4205
Adventurer....				
Sedan, 2d......	4032	320	4352	3980
Convertible.....	4331	343	4674	4120
DODGE				
Coronet 6				
Club Sedan, 2d..	2283	183	2466	3375
Sedan, 4d......	2349	188	2537	3425
Lancer, 2d......	2402	192	2594	3395

BODY MAKE AND MODEL	List Price at Factory without Federal Taxes	Federal Taxes and Handling Charges	Suggested Price at Factory including Federal Taxes	Shipping Weight
CHRYSLER CORP. cont'd				
DODGE, Cont'd				
Coronet V8				
Club Sedan, 2d.	2395	191	2586	3565
Sedan, 4d......	2461	196	2657	3615
Lancer, 2d......	2514	200	2714	3590
Lancer, 4d......	2586	205	2791	3620
Convertible.....	2816	223	3039	3775
Royal V8				
Sedan, 4d......	2672	212	2884	3640
Lancer, 2d......	2724	216	2940	3625
Lancer, 4d......	2797	222	3019	3690
Cust. Roy. V8				
Sedan, 4d......	2868	227	3095	3660
Lancer, 2d......	2920	231	3151	3675
Lancer, 4d......	2993	236	3229	3745
Convertible.....	3125	247	3372	3820
Sta. Wagons				
Sierra, 4d., 2s...	2829	224	3053	3940
Sierra, 4d., 3s...	2941	233	3174	4015
Cust.Sier.,4d., 2s	3029	239	3268	3980
Cust.Sier ,4d.,3s.	3141	248	3389	4020
IMPERIAL				
Custom				
Southampt, 2d..	4469	351	4820	4675
Sedan, 4d......	4568	358	4926	4745
Southampt., 4d..	4568	358	4926	4745
Crown				
Southampt., 2d..	4928	385	5313	4810
Sedan, 4d......	5155	403	5558	4830
Southampt., 4d..	5155	403	5558	4840
Convertible.....	5273	411	5684	4850
Le Baron				
Sedan, 4d......	5570	433	6003	4865
Southampt., 4d..	5570	433	6003	4875
Limousine......	14579	1021	15600	5960
PLYMOUTH†				
Savoy 8				
Club Sedan.....	2138	214	2352	3390
Sedan, 4d......	2185	217	2402	3425
Belvedere 8				
Club Sedan.....	2284	225	2509	3395
Sedan, 4d......	2331	228	2559	3430
Hardtop, 2d....	2351	230	2581	3405
Hardtop, 4d....	2410	254	2664	3475
Convertible.....	2568	246	2814	3580
Fury 8				
Sedan, 4d......	2453	238	2691	3455
Hardtop, 2d....	2475	239	2714	3435
Hardtop, 4d....	2528	243	2771	3505
Suburban 8				
Deluxe, 2d, 6p...	2456	238	2694	3690
Deluxe, 4d, 6p...	2518	243	2761	3725
Custom, 2d, 6p..	2568	246	2814	3690
Custom, 4d, 6p..	2630	251	2881	3730
Custom, 4d, 9p..	2732	259	2991	3775
Sport, 4d, 6p....	2760	261	3021	3760
Sport, 4d, 9p....	2862	269	3131	3805
Spt. Fury 8				
Hardtop, 2d....	2673	254	2927	3475
Convertible.....	2857	268	3125	3670
FORD MOTOR CO.				
EDSEL				
Ranger				
Sedan, 2d......	2398	231	2629	3547
Sedan, 4d......	2448	236	2684	3774
Hardtop, 2d....	2453	238	2691	3591
Hardtop, 4d....	2515	241	2756	3682
Corsair				
Sedan, 4d......	2567	245	2812	3696
Hardtop, 2d....	2573	246	2819	3778
Hardtop, 4d....	2635	250	2885	3709
Convertible.....	2807	265	3072	3790
Sta. Wagons				
Villager, 4d, 6p..	2715	256	2971	3930
Villager, 4d, 9p..	2792	263	3055	3842
FORD*				
Custom V8-300				
Bus. Tudor.....	2044	206	2250	3384
Tudor Sedan....	2125	212	2337	3411
Fordor Sedan...	2175	216	2391	3485
Fairlane V8				
Club Sedan.....	2253	222	2475	3433
Town Sedan....	2303	226	2529	3514
Fairlane 500-V8				
Club Sedan.....	2365	229	2594	3466
Town Sedan....	2415	233	2648	3518

BODY MAKE AND MODEL	List Price at Factory without Federal Taxes	Federal Taxes and Handling Charges	Shipping Price at Factory Including Federal Taxes	Shipping Weight
FORD MOTOR CO. cont'd				
FORD, Cont'd				
Club Victoria....	2421	234	2655	3439
Town Victoria...	2481	239	2720	3552
Galaxie V8				
Club Sedan.....	2413	233	2646	3478
Town Sedan....	2463	237	2700	3506
Club Victoria...	2469	238	2707	3439
Town Victoria...	2529	243	2772	3595
Sunliner........	2701	256	2957	3628
Skyliner........	3063	283	3346	4064
Sta. Wag. V8				
Tudor Ranch...	2449	236	2685	3691
Fordor Ranch...	2511	241	2752	3785
Ctry. Sed., 2d...	2552	244	2796	3714
Ctry. Sed., 4d, 6p	2614	249	2863	3819
Ctry. Sed., 4d. 9p	2692	255	2947	3868
Ctry. Squire, 9p.	2812	264	3076	3859
Thunderbird				
Hardtop........	3368	328	3696	3813
Softtop.........	3631	348	3979	3903
LINCOLN				
Lincoln				
Hardtop, 2d....	4479	423	4902	4812
Sedan, 4d......	4654	436	5090	4888
Landau, 4d.....	4654	436	5090	4876
Premiere				
Hardtop, 2d....	4893	454	5347	4869
Sedan, 4d......	5123	471	5594	4945
Landau, 4d.....	5123	471	5594	4933
Continental				
Hardtop, 2d....	6037	561	6598	5037
Sedan, 4d......	6267	578	6845	5113
Landau, 4d.....	6267	578	6845	5101
Convertible.....	6462	594	7056	5169
Town Car......	8435	773	9208	....
Limousine......	9386	844	10230	....
MERCURY				
Monterey				
Sedan, 2d......	2511	257	2768	3932
Sedan, 4d......	2571	261	2832	4001
Hardtop, 2d....	2592	262	2854	3966
Hardtop, 4d....	2651	267	2918	4034
Convertible.....	2867	283	3150	4126
Montclair				
Sedan, 4d......	3000	308	3308	4227
Hardtop, 2d....	3046	311	3357	4194
Hardtop, 4d....	3120	317	3437	4262
Park Lane				
Hardtop, 2d....	3590	365	3955	4362
Hardtop, 4d....	3660	371	4031	4430
Convertible.....	3823	383	4206	4518
Sta. Wagons				
Commuter, 2d..	2862	283	3145	4347
Commuter, 4d..	2927	288	3215	4435
Voyager, 4d.....	3451	342	3793	4515
Colony Park, 4d.	3580	352	3932	4527
GENERAL MOTORS CORP.				
BUICK				
La Sabre				
Sedan, 2d......	2485	255	2740	4159
Sedan, 4d......	2545	259	2804	4229
Hardtop, 2d....	2586	263	2849	4188
Hardtop, 4d....	2657	268	2925	4266
Convertible, 2d..	2847	282	3129	4216
Est. Wagon, 4d..	3025	285	3320	4565
Invicta				
Sedan, 4d......	3045	312	3357	4331
Hardtop, 2d....	3129	318	3447	4274
Hardtop, 4d....	3192	323	3515	4373
Convertible.....	3290	330	3620	4317
Est. Wagon, 4d..	3495	346	3841	4660
Electra				
Hardtop, 2d....	3460	358	3818	4465
Sedan, 4d......	3495	361	3856	4557
Hardtop, 4d....	3595	368	3963	4573
Electra 225				
Convertible, 2d..	3795	397	4192	4562
Hardtop, 4d, 4w.	3895	405	4300	4641
Hardtop, 4d, 6w.	3895	405	4300	4632
CADILLAC				
Series 62				
Hardtop, 2d....	4475	417	4892	4690
Hardtop, 4d, 4w.	4650	430	5080	4770
Hardtop, 4d, 6w.	4650	430	5080	....
Convertible.....	5000	455	5455	4855

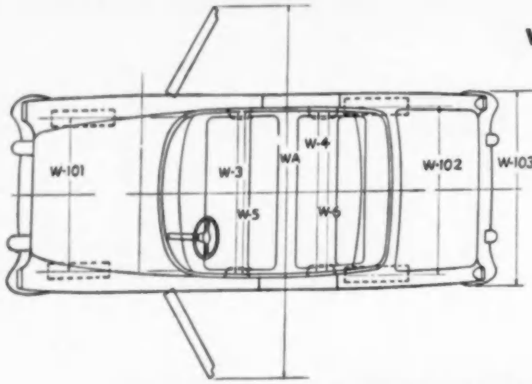
BODY MAKE AND MODEL	List Price at Factory without Federal Taxes	Federal Taxes and Handling Charges	Suggested Price at Factory including Federal Taxes	Shipping Weight
GENERAL MOTORS, cont'd				
CADILLAC, Cont'd				
DeVille				
Coupe..........	4810	442	5252	4720
Sedan, 4d, 4w...	5040	458	5498	4825
Sedan, 4d, 6w...	5040	458	5498	4850
60 Special				
Hardtop, 4d....	5700	533	6233	4890
Eldorado				
Biarritz........	6817	584	7401	....
Seville.........	6817	584	7401	....
Series 75				
Limousine, 9p...	....	...	9533	5490
Sedan, 9p......	....	...	9748	5570
CHEVROLET▲				
Biscayne V8				
Sedan, 2d......	2151	214	2365	3550
Sedan, 4d......	2201	218	2419	3615
Sta. Wagon, 2d..	2452	237	2689	3840
Sta. Wagon, 4d..	2514	242	2756	3920
Bel Air V8				
Sedan, 2d......	2280	224	2504	3570
Sedan, 4d......	2330	228	2558	3640
Sta. Wag., 4d, 6p	2617	250	2867	3960
Sta. Wag., 4d, 9p	2713	257	2970	3980
Impala V8				
Sedan, 4d......	2472	238	2710	3650
Hardtop, 2d....	2478	239	2717	3605
Hardtop, 4d....	2538	244	2782	3675
Convertible.....	2710	257	2967	3655
Sta. Wag., 4d, 6p	2749	260	3009	3970
Corvette				
Sports Car......	3563	312	3875	2900
OLDSMOBILE				
Series 88				
Sedan, 2d......	2574	263	2837	4040
Celeb. Sedan, 4d	2634	268	2902	4130
Hol. Coupe, 2d..	2687	271	2958	408[illegible]
Hol. Spt. Sed.,4d	2759	277	3036	41[illegible]
Convertible.....	2991	295	3286	4120
Fiesta..........	3065	300	3365	4465
Super 88				
Celeb. Sedan, 4d	2881	297	3178	4135
Hol. Coupe.....	3020	308	3328	4090
Hol. Spt. Sed.,4d	3092	313	3405	4185
Convertible.....	3268	327	3595	4135
Fiesta..........	3336	333	3669	4485
Series 98				
Celeb. Sedan, 4d	3533	357	3890	4390
Hol. Coupe.....	3715	371	4086	4360
Hol. Spt. Sed.,4d	3786	376	4162	4455
Convertible.....	3975	391	4366	4360
PONTIAC				
Catalina				
Sport Sedan, 2d.	2390	243	2633	3855
Sedan, 4d......	2456	248	2704	3940
Coupe..........	2515	253	2768	3885
Vista Sed., 4d...	2586	258	2844	3990
Con. Coupe.....	2805	275	3080	3955
Safari, 6p.......	2825	276	3101	4315
Safari, 9p.......	2925	284	3209	4390
Star Chief				
Sport Sedan, 2d.	2670	264	2934	3915
Sedan, 4d......	2736	269	3005	3990
Vista Sed., 4d...	2859	279	3138	4040
Bonneville				
Sport Coupe....	2970	287	3257	3970
Vista Sed., 4d...	3040	293	3333	4070
Conv. Coupe....	3175	303	3478	4060
Cust. Safari, 6p..	3225	307	3532	4355
STUDE-PACKARD CORP.				
STUDEBAKER				
Lark 6				
DeLuxe Series				
Sedan, 2d......	1756	169	1925	2577
Sedan, 4d......	1821	174	1995	2605
Sta. Wagon, 2d..	2100	195	2295	2710
Regal				
Sedan, 4d......	1984	191	2175	2600
Hardtop, 2d....	2076	199	2275	2710
Sta. Wagon, 2d..	2244	211	2455	2805
Lark V8				
Sedan, 4d......	2102	208	2310	2924
Hardtop, 2d....	2195	215	2410	3034
Sta. Wagon, 2d..	2362	228	2590	3148
Hawk				
Sport Coupe-6...	2155	205	2360	2810
Sport Coupe-8...	2274	221	2495	3165

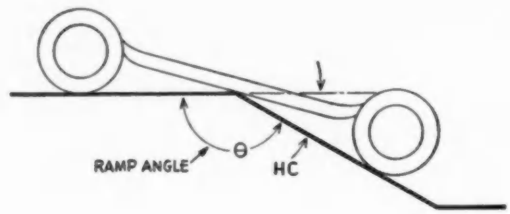
*Delivered Prices of 6 cyl. models are $118 less than the 8 cyl. models.

† Prices of six cyl. models are $119 less than 8 cyl. models

▲ Six cyl. models are $110 less than the 8 cyl. models.

WIDTH DIMENSIONS





1959 U. S. PASSENGER CAR BODY DATA

All dimensions apply to 5 or 6 passenger, 4 door sedan or equivalent model.

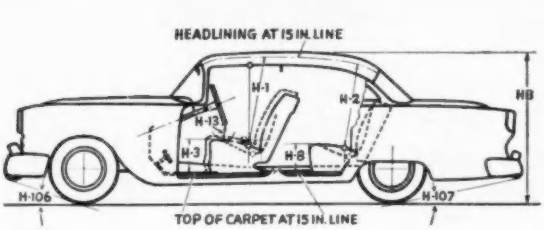
PASSENGER CAR MAKE AND MODEL	MISCELLANEOUS									GENERAL DIMENSIONS (Ins.)								
							Glass Area (Sq. In.)			L101	Overhang		Tread		Overall Dimensions			
											L104	L105	W101	W102	L103	W103	WA	HB
1	Type of Finish	Hood Hinge Location	Hood Counterbalanced	Hood Release Control	Windshield Type	Rear Window Type	Windshield	Back Light	Total	Wheelbase	Front—Including Bumper Guards	Rear—Including Bumper Guards	Front	Rear	Length—Bumper to Bumper	Width	Width—Doors Open	Height—Unloaded
AMERICAN MOTORS CORP.																		
Rambler American 5900[1]	E	R	Y	Ex	SC	C	740.0	700.0	2615.0	100.0	31.4	46.9	54.6	55.0	178.3	73.0	150.1	......
Six 5910[2]	E	R	Y	Ex	SC	C	1105.7	1078.6	3446.2	108.0	32.0	51.2	57.8	58.0	191.2	72.2	145.0	......
Rebel 5920[2]	E	R	Y	Ex	SC	C	1105.7	1078.6	3446.2	108.0	32.0	51.2	58.8	59.1	191.2	72.2	145.0	......
Ambassador 5980[2]	E	R	Y	Ex	SC	C	1105.7	1078.6	3446.2	117.0	32.0	51.2	57.8	59.1	200.2	72.2	145.0	......
CHRYSLER CORP.																		
Chrysler Windsor MC1-L[2]	E	R	Y	Ex	SC	C	1444.0	1319.0	4296.0	122.0	34.8	59.8	60.9	59.8	216.6	79.3	156.8	58.6
Saratoga MC2-M[2]	E	R	Y	Ex	SC	C	1444.0	1319.0	4293.0	126.0	34.8	59.8	61.2	60.0	220.6	79.3	156.8	58.6
New Yorker MC3-H[2]	E	R	Y	Ex	SC	C	1444.0	1319.0	4293.0	126.0	35.0	59.9	61.2	60.0	220.9	79.5	156.8	58.6
300-E MC3-H[3]	E	R	Y	Ex	CC	C	1586.0	1882.0	4601.0	126.0	35.0	59.9	61.2	60.0	220.9	79.5	167.4	56.5
De Soto Firesweep MS1-L[2]	E	R	Y	Ex	SC	C	1444.0	1319.0	4295.0	122.0	35.0	58.5	60.9	59.8	215.5	78.7	158.6	58.6
Firedome MS2-M[2]	E	R	Y	Ex	SC	C	1444.0	1319.0	4293.0	126.0	35.0	58.5	60.9	59.8	219.5	78.7	158.6	58.9
Fireflite MS3-H[2]	E	R	Y	Ex	SC	C	1444.0	1319.0	4293.0	126.0	35.0	58.5	60.9	59.8	221.1	78.7	158.6	58.9
Adventurer MS3-H[3]	E	R	Y	Ex	CC	C	1586.0	1882.0	4601.0	126.0	35.0	58.5	60.9	59.8	221.1	78.7	167.4	56.9
Dodge Coronet MD1-L[2]	E	R	Y	Ex	SC	SC	1444.0	1173.0	4149.0	122.0	35.2	60.2	60.9	59.8	217.4	80.0	156.8	58.4
Coronet MD2-L[2]	E	R	Y	Ex	SC	SC	1444.0	1173.0	4149.0	122.0	35.2	60.2	61.4	60.2	217.4	80.0	156.8	58.4
Roy. MD3-M[2], Cust. Roy. MD3-H[2]	E	R	Y	Ex	SC	SC	1444.0	1173.0	4149.0	122.0	35.2	60.2	61.4	60.2	217.4	80.0	156.8	58.6
Imperial Imp., Crown, Le Baron MY1[2]	E	R	Y	Ex	CC	C	1622.0	1319.0	4637.0	129.0	37.6	59.7	61.8	62.4	226.3	81.0	159.7	56.9
Plymouth Savoy MP1-L[2], Bel. MP1-M[2]	E	R	Y	Ex	SC	SC	1444.0	1173.0	4149.0	118.0	33.1	58.9	60.9	59.6	208.2	78.0	156.8	58.6
Savoy MP2-L[2], Belvedere MP2-M[2], Fury MP2-H[2]	E	R	Y	Ex	CC	SC	1444.0	1173.0	4149.0	118.0	33.1	58.9	60.9	59.7	208.2	78.0	156.8	58.5
Sport Fury MP2-P[3]	E	R	Y	Ex	CC	SC	1586.0	1205.0	4114.0	118.0	33.1	58.9	60.9	59.7	208.2	78.0	167.4	56.0
FORD MOTOR CO.																		
Edsel Ranger 58D[2]	E	F	Y	In	SC	C	1259.9	1136.5	3655.4	120.0	35.5	55.4	59.0	56.4	210.9	79.8	148.8	57.7
Corsair 58B[2]	E	F	Y	In	SC	C	1259.9	1136.5	3655.4	120.0	35.5	55.4	59.0	56.4	210.9	79.8	148.8	57.9
Ford Cust. 300, 58E[2], Frln. 58A[2], Fairlane 500, 58B[2], Galaxie 54A[2]	E	R	Y	In	C	C	1259.9	1136.5[7]	3655.4[8]	118.0	34.2	55.8	59.0	56.4	208.0	76.8	148.9	57.7
Thunderbird 63A[3]	E	F	Y	In	C	Fl	1250.0	750.0	2913.0	113.0	35.6	56.7	60.0	57.0	205.3	77.0	163.3	54.2
Lincoln Lincoln 53A[2], Premiere 53B[2]	E	F	Y	In	CC	C	1701.1	1419.8	4560.6	131.0	35.4	60.6	61.0	61.0	227.1	80.1	157.9	58.0
Continental 54A[2]	E	F	Y	In	CC	TF	1701.1	633.1	3773.9	131.0	35.4	60.6	61.0	61.0	227.1	80.1	157.9	58.0
Mercury Monterey 58A[2]	E	F	Y	In	CC	C	1882.9	1345.8	4487.6	126.0	34.7	57.1	60.0	60.0	217.8	80.7	159.4	57.5
Montclair 58B[2]	E	F	Y	In	CC	C	1882.9	1345.8	4487.6	126.0	34.7	57.1	60.0	60.0	217.8	80.7	170.1	57.8
Park Lane 57C[4]	E	F	Y	In	CC	C	1882.9	1850.5	5041.4	128.0	34.7	60.1	60.0	62.0	222.8	80.7	159.4	57.9
GENERAL MOTORS CORP.																		
Buick Le Sabre 4400[2], Invicta 4600[2]	L	R	Y	Ex	CC	C	1740.1	1557.6	4691.0	123.0	34.6	59.8	62.4	60.0	217.4	80.7	154.4	58.6
Electra 4700[2]	L	R	Y	Ex	CC	C	1740.1	1557.6	4763.9	126.3	34.6	59.8	62.4	60.0	220.6	80.7	154.4	58.8
Electra 4800[2]	L	R	Y	Ex	CC	C	1740.1	1557.6	4919.1	126.3	34.6	64.4	62.4	60.0	225.4	80.7	154.4	58.8
Cadillac 6029[2]	L	R	Y	Ex	CC	C	1740.1	1553.7	4915.2	130.0	34.5	60.5	61.0	61.0	225.0	81.1	......	......
6239[2]	L	R	Y	Ex	CC	C	1740.1	1553.7	4915.2	130.0	34.5	60.5	61.0	61.0	225.0	80.2	......	......
6723[2]	L	R	Y	Ex	CC	C	1748.4	461.7	4291.1	149.8	34.5	60.5	61.0	61.0	244.8	80.2	......	......
Chevrolet Biscayne[2], Bel Air[2]	L	R	Y	Ex	CC	SC	1740.1	1553.7	4687.1	119.0	32.6	59.3	60.3	59.3	210.9	79.9	148.9	58.1
Impala 1700[2], 1800[2]	L	R	Y	Ex	CC	SC	1740.1	1553.7	4687.1	119.0	32.6	59.3	60.3	59.3	210.9	79.9	148.9	58.1
Corvette 867[5]	L	F	N	In	SC	FP	908.0	408.0	1816.0	102.0	33.0	42.4	57.0	59.0	177.2	72.8	......	52.4
Oldsmobile Dynamic 88[2], Super 88[2]	L	R	Y	Ex	CC	C	1809.7	1622.0	5040.7	123.0	36.4	59.0	61.0	61.0	218.4	80.8	148.9	57.7
Ninety Eight 98[2]	L	R	Y	Ex	CC	C	1809.7	1622.7	5124.6	126.3	36.4	60.3	61.0	61.0	223.0	80.8	154.4	57.7
Pontiac Catalina 5021[2]	L	R	Y	Ex	CC	CC	1740.1	1553.7	4687.1	122.0	35.2	56.5	63.7	64.0	213.7	80.7	148.9	56.6
Star Chief 5024[2]	L	R	Y	Ex	CC	CC	1740.1	1553.7	4687.1	124.0	35.2	61.5	63.7	64.0	220.7	80.7	148.9	56.6
Bonneville 5027[4], 5028[6]	L	R	Y	Ex	CC	CC	1711.8	1309.1	4081.2	124.0	35.2	61.5	63.7	64.0	220.7	80.7	148.9	56.8
STUDEBAKER-PACKARD CORP.																		
Studebaker Lark 59-S[2]	E	R	N	In	C	C	1121.7	897.7	3232.2	108.5	26.4	40.1	57.4	56.6	175.0	71.4	135.4	59.2
Lark 59-V[2]	E	R	N	In	C	C	1121.7	897.7	3232.2	108.5	26.4	40.1	57.4	56.6	175.0	71.4	135.4	58.9
Silver Hawk 59-S[3], 59-V[3]	E	R	N	Ex	C	C	858.0	910.0	2866.0	120.5	34.9	48.6	57.3[9]	56.3[10]	204.0	71.3	153.3	57.4[11]

ABBREVIATIONS

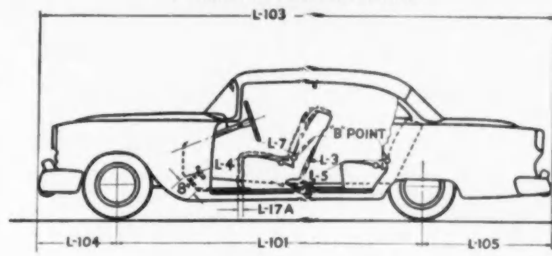
1—Two door sedan.
2—Four door sedan.
3—Two door hard top.
4—Four door hard top.
5—Two door convertible.
6—Four door station wagon.
7—Galaxie, 766.8.
8—Galaxie, 3285.7.
9—Eight cylinder models, 57.4.
10—Eight cylinder models, 56.6.
11—Eight cylinder models, 57.8.
C—One piece curved.
CC—Compound curved.
E—Enamel.
Ex—External.
F—Front.
Fl—One piece flat.
FP—One piece flexible plastic.
In—Internal.
L—Lacquer.
N—No.
R—Rear.
SC—Single curved.
TF—Three piece flat.
Y—Yes.

For Directory of Car Manufacturers listed above, see Table of Contents

HEIGHT DIMENSIONS



LENGTH DIMENSIONS



1959 U. S. PASSENGER CAR BODY DIMENSIONS

All dimensions apply to 5 or 6 passenger, 4 door sedan or equivalent model.

PASSENGER CAR MAKE AND MODEL	HEIGHT DIMENSIONS									WIDTH DIMENSIONS				LENGTH DIMENSIONS				
	Interior					Exterior				Interior				Interior				
	H1	H2	H3	H8	H13	H106	H107	HC	HD	W3	W4	W5	W6	L3	L4	L5	L7	L17a
2	Front Headroom	Rear Headroom	Front Cushion Height to Floor	Rear Cushion Height to Floor	Steering Wheel Clearance to Seat Cushion	Angle of Approach—Deg	Angle of Departure—Deg	Ramp Breakover Angle—Deg	Minimum Road Clearance—In	Front Seat Shoulder Room	Rear Seat Shoulder Room	Front Seat Hip Room	Rear Seat Hip Room	Back of Front Seat to Rear Seat Back	Leg Room—Front	Leg Room—Rear	Steering Wheel Clearance	Adjustment of Front Seat
AMERICAN MOTORS CORP.																		
Rambler American 5900¹	35.3	34.0	11.0	13.2	6.5	20.0	14.5	15.5	6.7	51.5	49.8	58.0	45.3	24.2	44.0	37.5	16.0	6.0
Six 5910²	36.0	35.0	10.4	14.2	5.6	21.5	14.5	14.5	6.7 RM	57.7	57.6	59.8	60.1	27.9	43.0	40.0	14.4	6.0
Rebel 5920²	36.0	35.0	10.4	14.2	5.6	21.0	14.0	14.0	6.5 RM	57.7	57.6	59.8	60.1	27.9	43.0	40.0	14.4	6.0
Ambassador 5980²	36.0	35.0	10.4	14.2	5.6	21.5	13.5	12.5	6.3 RM	57.7	57.6	59.8	60.1	27.9	43.0	40.0	14.4	6.0
CHRYSLER CORP.																		
Chrysler Windsor MC1-L²	35.7	34.5	10.8	11.9	6.5	15.0	10.0	10.4	5.5 FSM	60.5	60.4	63.0	62.7	31.0	45.5	43.0	15.4	5.0
Saratoga MC2-M²	35.7	34.5	10.8	11.9	6.5	16.0	11.0	10.2	5.6 FSM	60.5	60.4	63.0	62.7	31.0	45.5	43.0	15.4	5.0
New Yorker MC3-H²	35.7	34.5	10.8	11.9	6.5	16.0	11.0	10.8	6.0 FSM	60.5	60.4	63.0	62.7	31.0	45.5	43.0	15.4	5.0
300-E MC3-H³	34.4	33.7	10.8	10.0	6.2	16.0	11.0	10.8	6.0 FSM	61.0	60.5	63.0	56.0	27.0	45.5	38.0	15.4	5.0
De Soto Firesweep MS1-L²	35.7	34.5	10.8	11.9	6.5	15.0	10.0	10.4	5.5	60.5	60.4	63.0	62.7	29.1	45.5	43.0	15.4	4.8
Firedome MS2-M², Fireflite MS3-H²	35.7	34.5	10.8	11.9	6.5	15.0	11.0	10.4	5.6	60.5	60.4	63.0	62.7	29.1	45.5	43.0	15.4	4.8
Adventurer MS3-H³	34.4	33.7	10.8	10.0	6.2	15.0	11.0	10.4	5.6	61.0	60.5	63.0	56.0	25.0	45.5	38.0	15.4	4.8
Dodge Coronet MD1-L², MD2-L³	35.7	34.5	10.8	11.9	6.5	17.0	9.0	10.1	5.4 F	60.5	60.4	63.0	62.7	31.0	45.5	42.5	15.4	4.8
Roy. MD3-M², Cust. Roy. MD3-H²	35.7	34.5	10.8	11.9	6.5	17.0	9.0	10.4	5.5 F	60.5	60.4	63.0	62.7	31.0	45.5	42.5	15.4	4.8
Imperial Imperial MY1-L²	36.2	34.2	11.0	13.2	6.4	14.0	10.0	10.2	5.8 FSM	64.0	62.0	61.0	60.2	33.0	45.5	46.5	16.1	5.0
Crown MY1-M², Le Baron MY1-H²	36.2	34.2	10.8	13.2	6.6	14.0	10.0	10.2	5.8 FSM	64.0	62.0	61.0	60.2	33.2	45.3	46.5	15.9	5.0
Plymouth Savoy², Belvedere²	35.7	34.2	10.8	12.0	6.5	22.0	11.0	10.4	5.4 FSM	60.5	60.4	63.0	62.7	29.9	45.5	41.5	15.4	4.8
Fury MP2-H²	35.7	34.2	10.8	12.0	6.5	22.0	11.0	10.4	5.4 FSM	60.5	60.4	63.0	62.7	29.9	45.5	41.5	15.4	4.8
Sport Fury MP2-P³	33.8	34.0	10.0	9.5	6.2	22.0	11.0	10.4	5.4 FSM	61.0	60.5	63.0	56.0	26.5	45.5	36.5	15.4	4.8
FORD MOTOR CO.																		
Edsel Ranger 58D²	33.8	33.5	10.1	12.8	5.2	21.0	11.8	12.5	6.0 RFW	56.7	57.0	60.4	60.8	30.0	42.8	40.4	13.3	4.0
Corsair 58B²	33.8	33.5	10.1	12.8	5.2	23.0	12.0	12.9	6.0 RFW	56.7	57.0	60.4	60.8	29.8	42.8	40.4	13.3	4.0
Ford Custom 300 58E², Fairlane 58A², Fairlane 500 58B², Galaxie 54A²	33.8	33.5	10.1	12.8	5.5	22.9	12.0	12.7	6.0 F	56.7	57.0	60.4	60.8	31.0	42.8	40.4	13.0	4.0
Thunderbird 63A³	34.5	33.3	11.0	13.1	5.7	19.7	13.1	12.5	5.8 BST	56.2	54.1	59.6	48.7	26.2	43.4	38.1	14.4	4.0
Lincoln Lincoln 53A², Premiere 53B²	34.9	33.7	11.5	14.5	5.0	21.1	12.0	12.6	6.3 FRC	63.1	63.0	61.0	65.5	35.2	44.1	46.1	15.4	5.0
Continental 54A²	34.9	33.9	11.5	14.5	5.0	21.1	12.0	12.6	6.3 FRC	63.1	63.0	61.0	65.1	31.2	44.1	42.4	15.4	5.0
Mercury Monterey 58A²	33.2	32.9	10.4	12.4	4.9	20.3	11.3	11.1	5.7 FDL	60.5	60.8	62.5	62.8	32.5	44.3	43.6	14.8	5.0
Montclair 58B²	33.2	32.9	10.4	12.4	4.9	20.7	11.6	11.5	6.0 FDL	60.5	60.8	62.5	62.8	32.5	44.3	43.6	14.8	5.0
Park Lane 57C⁴	33.2	32.9	10.4	13.0	4.9	20.7	11.0	11.5	6.0 FDL	60.5	60.8	62.5	62.8	30.2	44.3	41.5	14.8	5.0
GENERAL MOTORS CORP.																		
Buick Le Sabre 4400²	34.7	33.9	9.8	13.2	5.1	22.2	14.2	12.5	6.1 RAS	60.4	59.0	65.4	65.4	29.7	44.0	42.8	14.1	4.8
Invicta 4600²	34.7	33.9	9.6	13.0	5.1	22.2	14.2	12.5	6.1 RAS	60.4	59.0	65.4	65.4	29.7	43.9	42.7	14.1	4.8
Electra 4700²	34.3	33.4	10.0	13.8	4.7	22.7	14.4	12.3	6.3 RAS	60.0	59.0	65.2	65.0	33.0	43.7	46.2	13.8	4.8
Electra 4800²	34.3	33.3	10.0	13.8	4.7	22.7	13.2	12.3	6.3 RAS	60.0	59.0	65.2	64.9	32.6	43.7	45.6	13.8	4.8
Cadillac 6029²	35.0	33.0	9.5	13.8	4.9	21.6	12.1	12.2	5.9	60.1	59.1	64.6	64.4	30.7	45.5	43.6	15.8	
6239²	33.2	33.8	9.4	12.0	4.9	21.6	12.1	12.2	5.9	60.5	59.1	64.6	65.7	31.5	45.5	42.9	15.8	
6723²	36.2	34.8	8.5	13.1	5.4	23.8	13.3	12.1	7.0	60.5	58.8	65.4	60.1	26.6	43.9	37.4	14.4	
Chevrolet Biscayne², Bel Air²	36.1	34.3	9.2	13.8	5.2	26.0	12.8	12.5	6.0 M	60.5	59.7	66.1	65.5	29.2	45.0	42.8	14.2	4.7
Impala 1700², 1800²	36.1	34.3	9.2	13.8	5.2	26.0	12.8	12.5	6.0 M	60.5	59.7	66.1	65.5	29.2	45.0	42.8	14.2	4.7
Corvette 867⁵	35.3	N	7.3	N	5.3	20.6	16.5	7.5	5.9 RSH	49.4	N	59.6	N	N	45.1	N	16.0	4.4
Oldsmobile Dynamic 88²	34.9	34.2	9.8	13.7	4.9	25.5	12.1	6.3	5.5 FCB	60.5	59.7	66.1	65.5	29.2	44.8	42.5	13.7	5.4
Super 88²	34.9	34.2	9.6	13.6	4.9	25.5	12.1	6.3	5.5 FCB	60.5	59.7	66.1	65.5	29.2	44.5	42.4	13.7	5.4
Ninety Eight 98²	34.3	34.2	9.9	13.6	4.9	25.5	11.8	6.1	5.5 FCB	60.5	59.1	66.1	65.5	32.5	44.5	45.4	13.7	5.4
Pontiac Catalina 5821²	34.8	33.9	9.9	13.6	4.6	20.8	12.1	11.5	5.8 FSM	60.4	59.0	65.4	65.4	29.2	44.8	42.5	14.6	4.8
Star Chief 5824²	34.8	33.9	9.7	13.3	4.6	20.8	11.2	11.5	5.8 FSM	60.4	59.0	65.4	65.4	29.2	44.6	42.2	14.6	4.8
Bonneville 5827⁶, 5828⁴	32.8	34.2	9.8	11.5	4.6	20.8	11.2	11.3	5.8 FSM	60.4	59.0	65.4	66.2	29.5	44.6	41.1	14.6	4.8
STUDEBAKER-PACKARD CORP.																		
Studebaker Lark 59-S-W², 59-V-W²	36.0	35.0	12.3	11.0	5.5	29.5	18.5	12.5	6.1 ERS	55.5	54.5	59.5	59.0	27.5	44.0	41.0	13.8	5.5
Silver Hawk 59-S-C³, 59-V-C³	35.5	34.5	12.3	9.6	4.5	20.0	17.0	14.0	6.5⁷FPC	55.0	53.0	59.5	58.0	26.5	44.0	37.0	13.3	5.5

ABBREVIATIONS

¹—Two door sedan.
²—Four door sedan.
³—Two door hard top
⁴—Four door hard top
⁵—Two door convertible.
⁶—Four door station wagon.
⁷—Eight cylinder models, 6.87 FPC.
BST—Bottom of spare tire well.
ERS—Engine rear support cross member.
F—Frame.
FCB—Frame cross bar.
FDL—Frame at dash line.
FPC—Body front pillar cross member.
FRC—Front resonator clamp.
FSM—Frame side member.
M—Muffler.
N—None.
RAS—Rear axle strut rod.
RFW—Rear of front wheels.
RSH—Rear spring front hanger.
RM—Rear of muffler.

For Directory of Car Manufacturers listed above, see Table of Contents

GENERAL ENGINE DATA, PISTONS

PASSENGER CAR MAKE AND MODEL 3	STANDARD ENGINE												Shipping Weight 5-6 Pass., 4 Dr. Sed.	Weight per Cu. In.[1]	Weight per Hp.[1]	HP per Cu. In.	PISTONS								
	Type	Valve Arrangement	Number of Cylinders, Bore and Stroke	Piston Disp.—Cu. In.	Compression Ratio (to 1)		Mounting Points		Taxable HP	Published Maximum BHP at Engine RPM	Published Maximum Torque (lb. ft. at RPM)	Recommended Idle Speed—RPM					Description and Finish	Weight—Oz. (Piston Only)	Clearance			Ring Groove Depth			
					Standard	Optional	Front	Rear											Top Land	Top of Skirt	Bottom of Skirt	No. 1 Ring	No. 2 Ring	No. 3 Ring	No. 4 Ring
AMERICAN MOTORS CORP.																									
Rambler American 5900	IL	L	6-3⅛x4¼	195.6	8.00	N	2	2	23.44	90-3800	150-1600	550	2476	15.27	33.07	.460	Fh,So,Tp,Co	14.00	.0180	.0012	.0009	.1690	.1690	.1730	N
Six 5910	IL	IH	6-3⅛x4¼	195.6	8.70	N	2	2	23.44	127-4200	180-1600	550	2934	17.56	27.04	.649	So,Tp,Co	14.70	.0180	.0012	.0009	.1690	.1690	.1730	N
Rebel 5920	V	IH	8-3½x3¼	250.0	8.70	N	2	2	39.20	215-4900	260-2500	550	3287	15.15	17.61	.860	SS,Tp,Au	18.00	.0300	.0017	.0012	.1870	.1870	.1890	N
Ambassador 5980	V	IH	8-4x3¼	327.0	9.70	N	2	2	51.20	270-4700	360-2600	550	3428	12.01	14.55	.826	Ss,Tp,Au	23.45	.0300	.0017	.0012	.1870	.1870	.1890	N
CHRYSLER CORP.																									
Chrysler Windsor MC1-L	V	IH	8-4 1/32x3¾	383.0	10.10	N	2	1	52.00	305-4600	410-2400	475	3800	11.23	14.10	.796	SS,St,E,Tp	26.30	.0045	.0008	......	.2100	.2100	.2000	N
Saratoga MC2-M	V	IH	8-4 1/32x3¾	383.0	10.10	N	2	1	52.00	325-4600	425-2800	475	4010	11.78	13.88	.849	Ss,St,E,Tp	26.30	.0045	.0008	......	.2100	.2100	.2000	N
New Yorker MC3-H	V	IH	8-4 3/16x3¾	413.0	10.10	N	2	1	55.90	350-4600	470-2800	475	4120	11.19	13.20	.847	Ss,St,E,Tp	27.50	.0045	.0008	......	.2100	.2100	.2000	N
300-E MC3-H	V	IH	8-4 3/16x3¾	413.0	10.10	N	2	1	55.90	380-5000	450-3600	625	4290	11.60	12.61	.920	Ss,St,E,Tp	27.50	.0045	.0008	......	.2100	.2100	.2000	N
De Soto Firesweep MS1-L	V	IH	8-4⅛x3⅜	361.0	10.00	N	2	1	54.30	290-4600	390-2400	475	3670	11.55	14.38	.803	Ss,St,E,Tp	25.60	.0040	.0008	......	.2100	.2100	.2000	N
Firedome MS2-M	V	IH	8-4¼x3⅜	383.0	10.10	N	2	1	57.80	305-4600	410-2400	475	3840	11.33	14.23	.796	Ss,St,E,Tp	27.20	.0040	.0008	......	.2100	.2100	.2000	N
Fireflite MS3-H	V	IH	8-4¼x3⅜	383.0	10.10	N	2	1	57.80	325-4600	425-2800	475	3920	11.54	13.60	.849	Ss,St,E,Tp	27.20	.0040	.0008	......	.2100	.2100	.2000	N
Adventurer MS3-H	V	IH	8-4¼x3⅜	383.0	10.10	N	2	1	57.80	350-5000	425-3600	675	3980	11.70	12.80	.914	Ss,St,E,Tp	27.50	.0040	.0008	......	.2100	.2100	.2000	N
Dodge Coronet MD1-L	IL	L	6-3¼x4⅝	230.0	8.00	N	2	1	25.30	135-3600	205-1200	475	3425	17.07	29.07	.587	Us,E,Tp	15.80	.0030	.0010	......	.1700	.1700	.1700	.1700
Coronet MD2-L	V	IH	8-3 31/32x3 5/16	326.0	9.20	N	2	1	49.90	255-4400	350-2400	475	3615	12.62	16.14	.702	Sb,E,Tp	20.80	.0032	.0010	......	.2100	.2100	.2000	N
Royal MD3-M	V	IH	8-4⅛x3⅜	361.0	10.10	N	2	1	54.30	295-4600	390-2400	475	3640	11.47	14.03	.817	Ss,St,E,Tp	25.60	.0042	.0008	......	.2100	.2100	.2000	N
Custom Royal MD3-H	V	IH	8-4⅛x3⅜	361.0	10.10	N	2	1	54.30	305-4600	400-2800	475	3660	11.52	13.64	.845	Ss,St,E,Tp	25.60	.0042	.0008	......	.2100	.2100	.2000	N
Imperial Custom, Crown, Le Baron MY1	V	IH	8-4 3/16x3¾	413.0	10.10	N	2	1	55.90	350-4600	470-2800	475	4735	12.68	14.96	.847	Ss,St,E,Tp	27.50	.0045	.0008	......	.2100	.2100	.2000	N
Plymouth Savoy, Belvedere MP1	IL	L	6-3¼x4⅝	230.0	8.00	N	2	1	25.30	132-3600	205-1200	475	3275	16.41	28.60	.574	Us,E,Tp	15.80	.0030	.0007	......	.1700	.1700	.1700	.1700
Savoy, Belvedere, Fury MP2	V	IH	8-3 29/32x3 5/16	318.0	9.00	N	2	1	48.90	230-4400	340-2400	475	3425	12.34	17.07	.723	Sb,Hs,E,Tp	21.00	.0032	.0010	......	.2100	.2100	.2000	N
Sport Fury MP2-P	V	IH	8-3 29/32x3 5/16	318.0	9.00	N	2	1	48.90	260-4400	345-2800	475	3475	12.50	15.29	.818	Sb,Hs,E,Tp	21.00	.0032	.0010	......	.2100	.2100	.2000	N
FORD MOTOR CO.																									
Edsel Ranger	IL	IH	6-3⅝x3 19/32	223.0	8.40	N	2	1	31.54	145-4000	206-2200	500	3574	18.27	28.10	.650	Au,So,Tp	19.20	.0142	.0023	.0015	.2051	.2051	.2051	N
Ranger	V	IH	8-3¾x3 19/64	292.0	8.80	N	2	1	45.00	200-4400	285-2200	500	3773	14.63	21.37	.685	Au,So,Tp	......	.0142	.0023	.0015	.2116	.2116	.2061	N
Corsair	V	IH	8-4x3 19/64	332.0	8.90	N	2	1	51.20	225-4400	325-2200	500	3696	12.64	18.65	.678	Au,So,Tp	......	.0194	.0028	.0018	.2121	.2121	.2086	N
Ford Custom 300, Fairlane, Fairlane 500	IL	IH	6-3⅝x3 19/32	223.0	8.40	N	2	1	31.54	145-4000	206-2200	500	3385	17.42	26.79	.650	Au,So,Tp	19.20	.0142	.0023	.0015	.2051	.2051	.2051	N
Custom 300, Fairlane, Fairlane 500	V	IH	8-3¾x3 19/64	292.0	8.80	N	2	1	45.00	200-4400	285-2200	500	3486	13.65	19.93	.685	Au,So,Tp	19.60	.0142	.0023	.0015	.2116	.2116	.2061	N
Thunderbird	V	IH	8-4x3½	352.0	9.60	N	2	1	51.20	300-4600	395-2800	500	3813	12.25	14.38	.852	Au,So,Tp	24.30	.0196	.0028	.0018	.2121	.2121	.2086	N
Lincoln Lincoln, Premiere, Continental	V	IH	8-4 19/64x3 45/64	430.0	10.00	N	2	1	59.17	350-4400	490-2800	450	4823	12.38	15.21	.814	Au,Ss,Tp	29.80	.0191	.0028	.0018	.2271	.2271	.2086	N
Mercury Monterey	V	IH	8-3 13/16x3 7/16	312.0	8.75	N	2	1	46.21	210-4400	325-2200	450	3902	14.11	20.96	.673	Au,So,Cg,Fh,Tp	20.60	.0257	.0017	.0009	.2026	.2026	.1936	N
Montclair	V	IH	8-4 19/64x3 19/64	383.0	10.00	N	2	1	59.17	322-4600	420-2800	450	4158	12.16	14.47	.841	Au,Ss,Tp	31.30	.0191	.0028	.0018	.2271	.2271	.2086	N
Park Lane	V	IH	8-4 19/64x3 45/64	430.0	10.00	N	2	1	59.17	345-4400	480-2800	450	4388	11.37	14.17	.802	Au,Ss,Tp	29.80	.0191	.0028	.0018	.2271	.2271	.2086	N
GENERAL MOTORS CORP.																									
Buick Le Sabre 4400	V	IH	8-4⅛x3 13/32	364.0	8.50	10.50	2	1	54.45	250-4400[2]	384-2400[2]	485	4229	12.99	18.92	.687	Cg,Ts,Ds	22.64	.0330	.0011	.0024	.2150	.2175	.2200	N
Invicta 4600: Electra 4700, 4800	V	IH	8-4 3/16x3 41/64	401.0	10.50	N	2	1	56.11	325-4400	445-2800	485	4331	12.05	14.86	.810	Cg,Ts,Ds	23.68	.0330	.0013	.0028	.2150	.2175	.2175	N
Cadillac 60, 62, 75	V	IH	8-4x3⅞	390.0	10.50	N	2	1	51.20	325-4800[3]	430-3100[4]	450	4770	13.51	16.22	.833	T,Cg,Ct,Sc	22.56	.0345	.0015	N	.2080	.2080	.2080	N
Chevrolet Biscayne 1100, Bel Air 1500, Impala 1700	IL	IH	6-3 9/16x3 15/16	235.5	8.25	N	2	1	30.40	135-4000	217-2200	475	3605	17.43	30.41	.573	Fh,Ce	18.88	.0375	.0008	......	.2020	.2020	.2020	N
Biscayne 1200, Bel Air 1600, Impala 1800	V	IH	8-3⅞x3	283.0	8.50	9.50[5]	2	1	48.00	185-4600	275-2400	475	3600	14.49	22.16	.654	Fh,Ss,Au	20.40	.0390	.0008	......	.2188	.2188	.2126	N
Corvette 867	V	IH	8-3⅞x3	283.0	9.50	10.50	2	1	48.00	230-4800	300-3000	475	2840	11.80	14.52	.813	Fh,Ss,Au	......	.0390	.0018	......	.2186	.2186	.2106	N
Oldsmobile Dynamic 88	V	IH	8-4x3 11/16	371.0	9.75	N	1	2	51.00	270-4600	390-2400	460	4162	12.57	17.27	.728	Au,Cg,Tp,St	25.82	.0310	.0018	.0013	.2095	.2095	.1995	N
Super 88, Ninety-Eight	V	IH	8-4⅛x3 11/16	394.0	9.75	N	1	2	51.00	315-4600	435-2800	460	4202	11.93	14.93	.799	Au,Cg,Tp,St	27.76	.0310	.0018	.0013	.2160	.2160	.2060	N
Pontiac Catalina 59-21, Star Chief 59-24	V	IH	8-4 1/16x3¾	389.0	8.60	10.00[5]	2	1	52.80	245-4200	392-2000	460	3940	11.41	18.12	.630	Cg,Ss,Sb,Tp	24.19	.0285	.0012	.0009	.2110	.2010	.1835	N
Bonneville 59-27, 59-28	V	IH	8-4 1/16x3¾	389.0	8.60	10.00[5]	2	1	52.80	260-4200	400-2800	460	4070	11.75	17.58	.668	Cg,Ss,Sb,Tp	24.19	.0285	.0012	.0009	.2110	.2010	.1835	N
STUDEBAKER-PACKARD CORP.																									
Studebaker Lark VI 59-S	IL	L	6-3x4	169.6	8.30	7.00	2	2	21.60	90-4000	145-2000	550	2605	18.31	34.50	.531	Cg,T,Tp	10.60	.0173	SF	SF	.1635	.1485	.1685	N
Lark VIII 59-V	V	IH	8-3 9/16x3¼	259.2	8.80	7.50[6]	2	1	40.60	180-4500	260-2800	550	2924	13.21	19.02	.694	Cg,Ts,Tp	16.21	.0195	SF	SF	.1938	.1938	.1938	N
Silver Hawk 59-S	IL	L	6-3x4	169.6	8.30	7.00	2	1	21.60	90-4000	145-2000	550	2810	19.52	36.78	.531	Cg,Tp,T	10.60	.0173	SF	SF	.1635	.1485	.1685	N
Silver Hawk 59-V	V	IH	8-3 9/16x3¼	259.2	8.80	7.50[6]	2	1	40.60	180-4500	260-2800	550	3165	14.14	20.36	.694	Cg,Tp,Ts	16.21	.0190	SF	SF	.1938	.1938	.1938	N

ABBREVIATIONS

1—Shipping weight plus 500 lb. for passengers, oil, water and gasoline.
2—With automatic transmission.
3—Eldorado models, 345-4800.
4—Eldorado models, 435-3400.
5—Also 10.50.
6—Also 7.00.

Au—Autothermic.
Ce—Controlled expansion.
Cg—Cam ground.
Co—Conformatic.
Ct—Contoured top.
Ds—Divorced skirt.
E—Elliptically turned.
Fh—Flat head.
Hs—Horizontal slot.
IH—In head.
IL—In line.
L—"L" head, valves at side.
N—None.
Sb—Steel band.
Sc—Stannate coated.
SF—Selective fit.
So—Solid skirt.
Ss—Slipper skirt.
St—Steel struts.
T—"T" slot.
Tp—Tin plated.
Ts—Transverse slot.
Us—"U" slot.
V—"V" type engine.

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PISTON RINGS, PISTON PINS, AND CONNECTING RODS

PASSENGER CAR MAKE AND MODEL	Bore	PISTON RINGS: Type—Oil or Compression No. 1	No. 2	No. 3	No. 4	Compression Material	Compression Coating	Compression Width	Compression Gap	Oil Material	Oil Coating	Oil Width	Oil Gap	Location of Expanders
AMERICAN MOTORS CORP.														
Rambler 6-5900, 5910	3 1/8	C	C	O	N	Al	Ch[1]	.0933[2]	.015	St	Ch	.0245	.035	OR
8-5920	3 1/2	C	C	O	N	Al	Ch[3]	.0777	.015	St	Ch	.0245	.035	OR
8-5980	4	C	C	O	N	Al	Ch[3]	.0777	.015	St	Ch	.0245	.035	OR
CHRYSLER CORP.														
Chrysler 8-MC1, MC2	4 1/4	C	C	O	N	CI	Tp	.0780	.019	CI		.1860	.019	OR
8-MC3	4 3/16	C	C	O	N	CI	Tp	.0780	.019	CI		.1860	.019	OR
De Soto 8-MS1	4 1/8	C	C	O	N	CI	Tp	.0780	.019	CI		.1860	.019	OR
8-MS2, MS3	4 1/4	C	C	O	N	CI	Tp	.0780	.019	CI		.1860	.019	OR
8-MS3 Adventurer	4 1/4	C	C	O	N	CI	Tp	.0780	.019	CI		.1860	.019	OR
Dodge 6-MD1	3 1/4	C	C	O	O	CI	Ch[4]	.0930	.015	CI		.1550	.015	N
8-MD2	3 61/64	C	C	O	N	CI	Tp	.0780	.015	CI		.1860	.015	OR
8-MD3	4 1/8	C	C	O	N	CI	Tp	.0780	.019	CI		.1860	.019	OR
Imperial 8-MY1	4 3/16	C	C	O	N	CI	Tp	.0780	.019	CI		.1860	.019	OR
Plymouth 6-MP1	3 1/4	C	C	O	O	CI	Ch[4]	.0930	.015	CI		.1550	.015	N
8-MP2	3 29/32	C	C	O	N	CI	Tp	.0780	.015	CI		.1860	.015	OR
FORD MOTOR CO.														
Edsel 6-Ranger	3 5/8	C	C	O	N	CIA	Ch[5]	.0933	.015	St	Ch	.1850	.035	OR
8-Ranger	3 3/4	C	C	O	N	CIA	Ch[5]	.0742	.015	St	Ch	.1850	.035	OR
8-Corsair	4	C	C	O	N	CIA	Ch[6]	.0742[7]	.018	St	Ch	.1860	.035	OR
Ford 6-Custom 300, Fairlane, Fairlane 500	3 5/8	C	C	O	N	CIA	Ch[5]	.0933	.015	St	Ch	.1850	.035	OR
8-Custom 300, Fairlane, Fairlane 500	3 3/4	C	C	O	N	CIA	Ch[5]			St	Ch	.1850	.035	OR
8-Thunderbird	4	C	C	O	N	CIA	Ch[6]	.0778[7]	.018	St	Ch	.1860	.035	OR
Lincoln 8-Lincoln, Premiere, Continental	4 19/64	C	C	O	N	CIA[8]	Ch[6]	.0778[9]	.035	St	Ch	.1879	.035	OR
Mercury 8-Monterey	3 51/64	C	C	O	N	CI	Ch[6]	.0778[9]	.017	St	Ch	.1879	.035	OR
8-Montclair, Park Lane	4 19/64	C	C	O	N	CI	Ch[6]	.0778[9]	.020	St	Ch	.1879	.035	OR
GENERAL MOTORS CORP.														
Buick 8-4400	4 1/8	C	C	O	N	CI	Lub	.0775	.020	St	N	.1830	.025	OR
8-4600, 4700, 4800	4 3/16	C	C	O	N	CI	Lub	.0775	.020	St	N	.1830	.025	OR
Cadillac 8-60, 62, 75	4	C	C	O	N	CI	Ch	.0781	.018	CI	N	.1875	.018	OR
Chevrolet 6-1100, 1500, 1700	3 9/16	C	C	O	N	CIA	V R	.0933	.012	St	Ch	.2275	.035	OR
8-1200, 1600, 1800	3 7/8	C	C	O	N	CIA	Ch[10]	.0778	.015	St	Ch	.2275	.035	OR
8-867	3 7/8	C	C	O	N	CIA	Ch	.0778	.015	St	Ch	.2275	.035	OR
Oldsmobile 8-88	4	C	C	O	N	CI	Ch[1]	.0778[2]	.018	St	Ch	.2010	.035	N
8-Super 88, 98	4 1/8	C	C	O	N	CI	Ch[1]	.0778[2]	.018	St	Ch	.2010	.035	N
Pontiac 8-5921, 5924, 5927, 5928	4 1/16	C	C	O	N	CI	Ch[1]	.0780	.021[11]	St	Ch	.1840	.025	OR
STUDEBAKER-PACKARD CORP.														
Studebaker 6-59-S	3	C	C	O	N	CI	Fe	.0930[12]	.012	CI	N	.1560	.011	OR
8-59-V	3 9/16	C	C	O	N	CI	Gr	.0780	.012	CI	Gr	.1870	.012	OR

PASSENGER CAR MAKE AND MODEL	PISTON PIN: Material	Length	Diameter	Type: Locked in—	Bushing Location	Bushing Material	Clearance In Piston	Clearance In Rod	Direction Offset in Piston	CONNECTING RODS: Material	Weight (oz.)	Length (center to center)	Bearing Material	Bearing Overall Length	Bearing Clearance	Bearing End Play
AMERICAN MOTORS CORP.																
Rambler 6-5900, 5910	1016	2.7500	.8597	R	N		Ppf	PF	MT	1145	23.00	6.6250	Bsb	.9600	.0013	.010
8-5920	1016	3.1870	.9307	R	N		Ppf	PF	MT	1145	27.60	6.3750	Bsb	.8670	.0018	.008
8-5980	1016	3.1870	.9307	R	N		Ppf	PF	MT	1145	27.60	6.3750	Cla	.8670	.0018	.008
CHRYSLER CORP.																
Chrysler 8-MC1, MC2	HMS	3.5600	1.0930	R	N		.0004	.0010	Ri	DFS	29.80	6.7700	Bsb	.9270	.0010	.013
8-MC3	HMS	3.5600	1.0930	R	N		.0004	.0010	Ri	DFS	29.80	6.7700	Bsb	.9270	.0010	.013
De Soto 8-MS1	HMS	3.5600	1.0930	R	N		.0004	.0010	Ri	DFS	28.60	6.3600	Bsb	.9270	.0010	.013
8-MS2, MS3	HMS	3.5600	1.0930	R	N		.0001	.0010	Ri	DFS	28.60	6.3600	Bsb	.9270	.0010	.013
8-MS3 Adventurer	HMS	3.5600	1.0930	R	N		.0004	.0010	Ri	DFS	29.80	6.7700	Bsb	.9270	.0010	.013
Dodge 6-MD1	HMS	2.7500	.8590	F	R	Brs	.0003	.0002	N	HMFS	27.90	7.8100	Bsb	1.0000	.0010	.009
8-MD2	HMS	3.0000	.9840	F	R	Brs	.0003	.0003	Ri	HMFS	25.60	6.1200	Bsb	.8430	.0012	.010
8-MD3	HMS	3.5600	1.0930	R	N		.0004	.0010	Ri	DFS	28.60	6.3600	Bsb	.9270	.0010	.013
Imperial 8-MY1	HMS	3.5600	1.0930	R	N		.0004	.0010	Ri	DFS	29.80	6.7700	Bsb	.9270	.0010	.013
Plymouth 6-MP1	HMS	2.7500	.8590	F	R	Brs	.0003	.0002	N	HMFS	27.90	7.8100	Bsb	1.0000	.0010	.009
8-MP2	HMS	3.0000	.9840	F	R	Brs	.0003	.0003	Ri	HMFS	25.60	6.1200	Bsb	.8430	.0012	.010
FORD MOTOR CO.																
Edsel 6-Ranger	AS	3.0230	.9122	F	R	Br	.0002	.0002	Ri	FS	29.63	6.2600	Bsb	1.0340	.0014	.006
8-Ranger	AS	3.0250	.9122	F	R	Br	.0002	.0002	Ri	FS	24.05	6.3220	Cla	.7410	.0018	.011
8-Corsair	AS	3.1630	.9752	F	R	Br	.0002	.0002	Ri	FS	25.75	6.5400	Clt	.7410	.0019	.011
Ford 6-Custom 300, Fairlane, Fairlane 500	AS	3.0230	.9122	F	R	Br	.0002	.0002	Ri	FS	29.63	6.2600	Bsb	1.0340	.0014	.008
8-Custom 300, Fairlane, Fairlane 500	AS	3.0250	.9122	F	R	Br	.0002	.0002	Ri	FS	24.05	6.3220	Cla	.7410	.0018	.011
8-Thunderbird	AS	3.1630	.9752	F	R	Br	.0002	.0002		FS	25.75	6.5400	Cla	.7410	.0019	.011
Lincoln 8-Lincoln, Premiere, Continental	5015	3.4900	.9752	R	N		.0020	N	Ri	1040	27.20	6.6000	Cla	.8610	.0016	.010
Mercury 8-Monterey	5015	3.0250	.9122	F	R	Br	.0002	.0002	Ri	1040	22.80	6.2320	Cla	.7260	.0016	.011
8-Montclair, Park Lane	5015	3.4900	.9752	R	N		.0002	N	Ri	1040	27.20	6.6000	Cla	.8610	.0016	.010
GENERAL MOTORS CORP.																
Buick 8-4400	1118	3.5200	.9996	R	N		.0001	.0011	N	1141	23.20	6.1000	Als	.8200	.0013	.009
8-4600, 4700, 4800	1118	3.5200	.9996	R	N		.0004	.0011	N	1141	24.38	6.2200	Als	.8200	.0013	.009
Cadillac 8-60, 62, 75	1015	3.0930	1.0000	R	N		.0005	PF	MT	1041	22.56	6.5000		.8185	.0013	.011
Chevrolet 6-1100, 1500, 1700	CS	3.1830	.8663	R	N		.0002	N	MT	FS	28.03	6.8125	Bsb	1.0080	.0017	.008
8-1200, 1600, 1800	CS	3.0000	.9272	R	N		.0002	N	MT	DFS	19.02	5.7000	Bsb	.8170	.0017	.011
8-867	CS	3.0000	.9272	R	N		.0002	N	MT	DFS		5.7000	Bsb	.8170	.0017	.011
Oldsmobile 8-88	1016	3.1260	.9805	F	R	Br	.0004	.0004	Ri	1139	35.58	6.9980	Als	.8260	.0016	.007
8-Super 88, 98	1016	3.1260	.9805	F	R	Br	.0004	.0004	Ri	1139	34.55	6.9980	Als	.8260	.0016	.007
Pontiac 8-5921, 5924, 5927, 5928	1117	3.2500	.9802	R	N		.0004	PF	Ri	1139	29.34	6.6250	Dsb	.8800	.0015	.009
STUDEBAKER-PACKARD CORP.																
Studebaker 6-59-S	8620	2.6250	.7500	R	N		.0002	N	N	1041	19.04	6.3750	Bsb	.9050	.0013	.007
8-59-V	5120	3.0620	.8750	R	N		.0002	N	N	1141	23.71	6.6250	Bsb	.8430	.0015	.011

ABBREVIATIONS

1—Upper only; lower, Lubrite.
2—Upper only; lower, .0930.
3—Upper only; lower, Ferrox.
4—Upper only; lower, tin plated.
5—Upper only; lower, oxide.
6—Upper only; lower, Phosphate.
7—Upper only; lower, .0933.
8—Upper only; lower, cast iron.
9—Upper only; lower, .0935.
10—Upper only; lower, wear resistant.
11—Upper only; lower, .019.
12—Upper only; lower, .1250.

Al—Alloy iron.
Als—Aluminum, steel backed.
AS—Alloy steel.
Br—Bronze.
Brs—Bronze on steel.
Bsb—Babbitt, steel backed.
C—Compression.
Ch—Chromium.
CI—Cast iron.
CIA—Cast iron alloy.
Cla—Copper lead alloy, steel backed.
Clt—Copper lead, tin alloy, steel backed.
CS—Chromium steel.
DFS—Drop forged steel.
Dsb—Durex, steel backed.
F—Floating.
Fe—Ferrox.
FS—Forged steel.
Gr—Granoseal.
HMFS—High manganese forging steel.
HMS—High manganese steel.
Lub—Lubrite.
MT—Toward major thrust side.
N—None.
O—Oil.
OR—Oil rings.
PF—Press fit.
Ppf—Palm press fit.
R—Connecting rod.
Ri—Right.
St—Steel.
Tp—Tin plated.
WR—Wear resistant.

For Directory of Car Manufacturers listed above, see Table of Contents

CRANKSHAFTS, CAMSHAFTS

PASSENGER CAR MAKE AND MODEL 5		CRANKSHAFT				Main Bearing									CAMSHAFT		Bearings		Type of Drive					
								Journal Diameter and Bearing Effective Length														Timing Chain		
Make	Model	Material	Vibration Dampener Type	End Thrust Taken Up by Bearing	Crankshaft End Play	Material	Clearance	No. 1	No. 2	No. 3	No. 4	No. 5	Direction of Cyl. Off-set	Connecting Rod Crankpin Journal Diameter	Location	Material	Material	Number	Gear or Chain	Crankshaft Gear or Sprocket Material	Camshaft Gear or Sprocket Material	No. of Links	Width	Pitch
AMERICAN MOTORS CORP.																								
Rambler	6-5900, 5910	DFS	RF	1	.0055	Bsb	.0013	2.4795x1.1250	2.4795x1.1250	2.4795x1.1250	2.4795x1.5310	None	N	2.0952	RS	CIA	Bsb	4	Ch	1117	110	60	1.0000	.375
	8-5920, 5980	DFS	RF	1	.0050	Bsb	.0017	2.4992x .9560	2.4992x .9500	2.4992x .9500	2.4992x .9500	2.4992x .9500	N	2.2487	Cen	CIA	Bsb	5	Ch	1117	110	62	.8750	.375
CHRYSLER CORP.																								
Chrysler	8-MC1, MC2, MC3	DFS	RD	3	.0045	Bsb	.0010	2.7500x .9100	2.7500x .9100	2.7500x .9400	2.7500x .9100	2.7500x .9100	N	2.3750	Cen	CI	Bsb	5	Ch	HMS	CI	50	.8750	.500
De Soto	8-MS1, MS2, MS3	DFS	RD	3	.0045	Bsb	.0010	2.6300x .9100	2.6300x .9100	2.6300x .9400	2.6300x .9100	2.6300x .9100	N	2.3800	Cen	CI	Bsb	5	Ch	HMS	CI	50	.8750	.500
	8-MS3 Adventurer	DFS	RD	3	.0045	Bsb	.0010	2.7500x .9100	2.7500x .9100	2.7500x .9400	2.7500x .9100	2.7500x .9100	N	2.3800	Cen	CI	Bsb	5	Ch	HMS	CI	50	.8750	.500
Dodge	6-MD1	DFS	RD	4	.0045	Bsb	.0010	2.5000x1.2400	2.5000x1.0300	2.5000x1.0300	2.5000x1.8700	None	L	2.0600	RS	CI	Bsb	4	Ch	HMS	CI	48	1.0200	.500
	8-MD2	DFS	RD	3	.0045	Bsb	.0010	2.5000x .8400	2.5000x .8400	2.5000x .8700	2.5000x .8400	2.5000x1.5300	N	2.1250	Cen	CI	Bsb	5	Ch	HMS	CI	68	.8750	.380
	8-MD3	DFS	RD	3	.0045	Bsb	.0010	2.6300x .9100	2.6300x .9100	2.6300x .9400	2.6300x .9100	2.6300x .9100	N	2.3750	Cen	CI	Bsb	5	Ch	HMS	CI	50	.8750	.500
Imperial	8-MY1	DFS	RD	3	.0045	Bsb	.0010	2.7500x .9100	2.7500x .9100	2.7500x .9400	2.7500x .9100	2.7500x .9100	N	2.3750	Cen	CI	Bsb	5	Ch	HMS	CI	50	.8750	.500
Plymouth	6-MP1	DFS	RD	4	.0045	Bsb	.0010	2.5000x1.2400	2.5000x1.0300	2.5000x1.0300	2.5000x1.8700	None	L	2.0600	RS	CI	Bsb[1]	4	Ch	HMS	CI	48	1.0200	.500
	8-MP2	DFS	RD	3	.0045	Bsb	.0010	2.5000x .8400	2.5000x .8400	2.5000x .8700	2.5000x .8400	2.5000x1.5300	N	2.1250	Cen	CI	Bsb	5	Ch	HMS	CI	68	.8750	.380
FORD MOTOR CO.																								
Edsel	6-Ranger	CIA	RFI	3	.0060	Bsb	.0015[2]	2.4984x1.1000	2.4984x1.1000	2.4984x1.3540	2.4984x1.3250	None		2.2984		AI	Bsb	4	Ch	SIS	CI	56	1.0000	.375
	8-Ranger	PAI	RFI	3	.0040	Cls	.0019	2.4984x .9070	2.4984x .9070	2.4984x1.1210	2.4984x .9070	2.4984x .9070		2.1884	Cen	CIA	Bsb	5	Ch	SIS	CI	56	1.0000	.375
	8-Corsair	PAI	RFI	3	.0040	Clt	.0018	2.7488x .9070	2.7488x .9070	2.7488x1.1210	2.7488x .9070	2.7488x .9070		2.4384	Cen	CIA	Bsb	5	Ch	SIS	CI	48	.8600	.500
Ford	6-Custom 300, Fairlane, Fairlane 500	CIA	RFI	3	.0060	Bsb	.0015[2]	2.4984x1.1000	2.4984x1.1000	2.4984x1.3540	2.4984x1.3250	None		2.2984		AI	Bsb	4	Ch	SIS	CI	56	1.0000	.375
	8-Custom 300, Fairlane, Fairlane 500	CIA	RFI	3	.0040	Cls	.0019	2.4984x .9070	2.4984x .9070	2.4984x1.1210	2.4984x .9070	2.4984x .9070		2.1884		AI	Bsb	5	Ch	SIS	CI	56	1.0000	.375
	8-Thunderbird	CIA	RFI	3	.0040	Cls	.0013	2.7488x .9070	2.7488x .9070	2.7488x1.1210	2.7488x .9070	2.7488x .9070		2.4384		AI	Bsb	5	Ch	SIS	CI	48	.8600	.500
Lincoln	8-Lincoln, Premiere, Continental	AI	RFI	3	.0060	Cls	.0019	2.8998x .9550	2.8998x .9550	2.8998x1.1190	2.8998x .9550	2.8998x .9550	R	2.5996	Cen	AI	Bsb	5	Ch	SIS	CI	52	.8840	.500
Mercury	8-Monterey	CIA	RFI	3	.0060	Cls	.0017	2.6239x .6930	2.6239x .6930	2.6239x .6650	2.6239x .6930	2.6239x .6930	R	2.1884	Cen	AI	Bsb	5	Ch	SIS	CI	56	1.0000	.375
	8-Montclair, Park Lane	CIA	RFI	3	.0060	Cls	.0019	2.8998x .9550	2.8998x .9550	2.8938x1.1190	2.8998x .9550	2.8998x .9550	R	2.5996	Cen	AI	Bsb	5	Ch	SIS	CI	52	.8640	.500
GENERAL MOTORS CORP.																								
Buick	8-4400	1145	RA	5	.0060	Dsb	.0013	2.4985x .9400	2.4985x .9400	2.4985x .9400	2.4985x .9400	2.4985x1.1990	N	2.2495	Cen	CIA	Bsb	5	Ch	SMP	CI	52	.6880	.500
	8-4600, 4700, 4800	1145	RA	3	.0060	Dsb	.0013	2.4985x .9400	2.4985x .9400	2.4985x .8910	2.4985x .9400	2.4985x1.2000	N	2.2495	Cen	CIA	Bsb	5	Ch	SMP	CI	52	.6880	.500
Cadillac	8-60, 62, 75	1145	RA	5	.0045	Dsb	.0017	2.6250x .9070	2.6250x .9070	2.6250x .9070	2.6250x .9070	2.6250x1.6220		2.2500		CI	Bsh	5	Ch	SI	1115	46	.6875	.500
Chevrolet	6-1100, 1500, 1700	FS	RFI	3	.0055	Bsb	.0016[3]	2.6840x1.0630	2.7150x .9070	2.7460x .9790	2.7770x1.1890	None	N	2.3115	RS	CIA	Bsh	4	G	St	Bfc	N	...	
	8-1200, 1600, 1800	FS	RFI	5	.0040	Bsb	.0021	2.2983x .7620	2.2983x .7620	2.2983x .7620	2.2983x .7620	2.2983x1.1690	N	1.9995	Cen	CIA	Bsb	5	Ch	St	CIA	46	.8750	.500
	8-867	FS	RM	5	.0040	Bsb	.0021	2.2983x .7620	2.2983x .7620	2.2983x .7620	2.2983x .7620	2.2983x1.1690	N	1.9995	Cen	CIA	Bsb	5	Ch	St	CIA	46	.8750	.500
Oldsmobile	8-88, Super 88, 98	1145	RA	5	.0060	Bsb	.0016[4]	3.0000x .8180	3.0000x .8180	3.0000x .8180	3.0000x .8180	3.0000x1.1950	N	2.5000	Cen	CIA	Bsb	5	Ch	1140	CI	48	.8440	.500
Pontiac	8-5921, 5924, 5927, 5928	PMI	RFI	4	.0060	Dsb	.0018[5]	3.0000x .9400	3.0000x .9400	3.0000x .9400	3.0000x1.1300	3.0000x1.5900	N	2.2500	Cen	CIA	Bsb	5	Ch	CHS	CAI	60	.8800[6]	.375
STUDEBAKER-PACKARD CORP.																								
Studebaker	6-59-S	1046	RM	1	.0045	Bsb	.0012	3.0620x1.3450	3.0620x1.1250	3.0620x1.1250	3.0620x1.5310	None	N	2.8120	RS	CIA	Bsb	4	G	CI	Bfc	N	...	...
	8-59-V	1046	RM	1	.0045	Bsb	.0017	2.5000x1.3090	2.5000x .9060	2.5000x .9060	2.5000x .9060	2.5000x1.5460	N	2.0000	Cen	CIA	Bsb	5	G	CI	Bfc	N	...	...

ABBREVIATIONS

1—No. 4 bearing is cast iron.
2—No. 4 journal, .0020.
3—Nos. 1 and 2 only; Nos. 3 and 4, .0018.
4—No. 5, .0022.
5—No. 1, .0015.
6—Morse only; Link-Belt, 1.0000.

AI—Alloy iron.
Bfc—Bakelite and fabric composition with steel hub.
Bsb—Babbitt, steel backed.
CAI—Cyanide hardened alloy iron.
Cen—Center, between cylinder banks.
Ch—Chain.
CHS—Carburized and hardened steel.
CI—Cast iron.
CIA—Cast iron alloy.
Cls—Copper lead alloy, steel backed.
Clt—Copper lead tin alloy, steel backed.
DFS—Drop forged steel.
Dsb—Durex, steel backed.
FS—Forged steel.
G—Gear.
HMS—High manganese steel.
L—Left.
N—None.
PAI—Pearlitic alloy iron.
PMI—Pearlitic malleable iron.
R—Right.
RA—Rubber absorption.
RD—Rubber dynamic.
RF—Rubber and friction.
RFI—Rubber floated.
RM—Rubber mounted.
RS—Right side.
SI—Sintered iron.
SIS—Sintered iron or steel.
SMP—Sintered metal powder.
St—Steel.

For Directory of Car Manufacturers listed above, see Table of Contents

VALVES, INTAKE AND EXHAUST

PASSENGER CAR MAKE AND MODEL —6—	Hydraulic Lifters	Special Provision for Valve Rotation (Intake or Exhaust)	Rocker Ratio—to-1	INTAKE Material	Overall Length	Actual Overall Head Diameter	Seat Angle (Deg.)	Seat Insert Material	Stem Diameter (In.)	Stem Guide Clearance	Lift (In.)	Springs Pressure (lb.) Valve Closed	Springs Pressure (lb.) Valve Open	Springs Length (in.) Valve Closed	Springs Length (in.) Valve Open	EXHAUST Material	Overall Length	Actual Overall Head Diameter	Seat Angle (Deg.)	Seat Insert Material	Stem Diameter (In.)	Stem Guide Clearance	Lift (In.)	Springs Pressure (lb.) Valve Closed	Springs Pressure (lb.) Valve Open	Springs Length (in.) Valve Closed	Springs Length (in.) Valve Open
AMERICAN MOTORS CORP.																											
Rambler 6-5900	NA	N	N	SCS	4.781	1.469	45	N	.3410	.0023	.324	39.0	78.5	1.750	1.440	2112N	4.781	1.281	45	N	.3410	.0023	.322	39.0	78.5	1.750	1.440
8-5910	NA	N	1.463	SCS	4.759	1.594	45	N	.3415	.0026	.366	67.5	120.0	1.813	1.438	2112N	4.759	1.343	45	N	.3410	.0031	.361	67.5	120.0	1.813	1.438
8-5920	NA	Bo	1.500	SCS	4.859	1.787	30	N	.3720	.0020	.375	88.0	155.0	1.813	1.438	21-4N	4.859	1.406	45	N	.3720	.0020	.375	88.0	155.0	1.813	1.438
8-5980	Std	Bo	1.500	SCS	4.859	1.787	30	N	.3720	.0020	.375	88.0	155.0	1.813	1.438	21-4N	4.859	1.406	45	N	.3720	.0020	.375	88.0	155.0	1.813	1.438
CHRYSLER CORP.																											
Chrysler 8-MC1, MC2	Std	E	1.500	SCS	4.780	1.950	45	N	.3700	.0020	.390	100.0	195.0	1.860	1.470	21-4N	4.780	1.600	45	N	.3700	.0030	.390	100.0	195.0	1.860	1.470
8-MC3	Std	E	1.500	SCS	4.870	2.080	45	N	.3700	.0020	.390	100.0	195.0	1.860	1.470	21-4N	4.880	1.740	45	N	.3700	.0030	.390	100.0	195.0	1.860	1.470
De Soto 8-MS1	Std	E	1.500	SCS	4.780	1.950	45	N	.3700	.0020	.390	100.0	195.0	1.860	1.470	21-4N	4.780	1.600	45	N	.3700	.0030	.390	100.0	195.0	1.860	1.470
8-MS2, MS3	Std	E	1.500	SCS	4.870	2.080	45	N	.3700	.0020	.390	100.0	195.0	1.860	1.470	21-4N	4.780	1.740	45	N	.3700	.0030	.390	100.0	195.0	1.860	1.470
Dodge 6-MD1	NA	N	N	SCS	4.840	1.530	45	N	.3400	.0020	.365	42.0	115.0	1.750	1.380	SCS	4.890	1.410	45	Al	.3400	.0040	.365	42.0	115.0	1.750	1.380
8-MD2	Std	E	1.500	SCS	4.600	1.840	45	N	.3700	.0020	.390	72.0	166.0	1.690	1.310	21-4N	4.580	1.560	45	N	.3700	.0030	.386	72.0	166.0	1.690	1.310
8-MD3	Std	E	1.500	SCS	4.780	1.950	45	N	.3700	.0020	.390	100.0	195.0	1.860	1.470	21-4N	4.780	1.600	45	N	.3700	.0030	.390	100.0	195.0	1.860	1.410
Imperial 8-MY1	Std	E	1.500	SCS	4.870	2.080	45	N	.3700	.0020	.390	100.0	195.0	1.860	1.470	21-4N	4.880	1.600	45	N	.3700	.0030	.390	100.0	195.0	1.860	1.470
Plymouth 6-MP1	NA	N	N	SCS	4.840	1.530	45	N	.3400	.0020	.365	42.0	115.0	1.750	1.380	CNS	4.890	1.410	45	Al	.3400	.0040	.365	42.0	115.0	1.750	1.380
8-MP2	NA	E	1.500	SCS	4.600	1.840	45	N	.3700	.0020	.390	72.0	166.0	1.690	1.310	21-4N	4.580	1.560	45	N	.3700	.0020	.386	72.0	166.0	1.690	1.310
FORD MOTOR CO.																											
Edsel 6-Ranger	NA	Bo	1.420	8645	5.110	1.780	45¾	N	.3420	.0017	.369	75.0	169.0	1.780	1.390	CAS	5.090	1.510	45½	N	.3402	.0035	.369	75.0	169.0	1.780	1.390
8-Ranger	NA	Bo	1.540	SCS	5.110	1.925	45½	N	.3420	.0017	.359	75.0	169.0	1.780	1.390	CAS	5.090	1.510	45½	N	.3407	.0030	.357	75.0	169.0	1.780	1.390
8-Corsair	Std	Bo	1.760	CNS	5.480	2.027	30½	N	.3715	.0017	.408	99.0	189.0	1.820	1.420	CAS	5.460	1.556	45½	N	.3697	.0035	.408	99.0	189.0	1.820	1.420
Ford 6-Custom 300, Fairlane, Fairlane 500	NA	Bo	1.420	8645	5.110	1.780	45¾	N	.3420	.0017	.369	75.0	169.0	1.780	1.390	CAS	5.090	1.510	45½	N	.3402	.0035	.369	75.0	169.0	1.780	1.390
8-Custom 300, Fairlane, Fairlane 500	NA	Bo	1.430	8645	5.110	1.925	45¾	N	.3420	.0017	.359	75.0	169.0	1.780	1.390	CAS	5.090	1.510	45¾	N	.3402	.0030	.357	75.0	169.0	1.780	1.390
8-Thunderbird	Std	Bo	1.760	8645	5.480	2.027	30	N	.3715	.0017	.408	99.0	179.0	1.820	1.420	CAS	5.460	1.556	45	N	.3697	.0035	.408	99.0	153.0	1.820	1.420
Lincoln 8-Lincoln, Premiere, Continental	Std	Bo	1.760	8645	5.363	2.088	45	N	.3715	.0017	.408	72.0	247.5	1.830	1.430	CAS	5.383	1.778	45	N	.3697	.0035	.408	72.0	247.5	1.830	1.430
Mercury 8-Monterey	NA	Bo	1.540	8645	5.110	1.925	45	N	.3420	.0017	.406	75.0	169.0	1.780	1.390	CAS	5.090	1.510	45	N	.3402	.0030	.404	75.0	169.0	1.780	1.390
8-Montclair, Park Lane	Std	Bo	1.760	8645	5.363	2.088	45	N	.3715	.0017	.408	72.0	247.5	1.830	1.430	CAS	5.383	1.778	45	N	.3697	.0035	.406	72.0	247.5	1.830	1.430
GENERAL MOTORS CORP.																											
Buick 8-4400	Std	N	1.600	CNS	4.785	1.875	45	N–	.3722	.0028	.403	42.0[1]	96.0[1]	1.600[1]	1.160[1]	SCS	4.785	1.500	45	N	.3713	.0040	.403	42.0[1]	96.0[1]	1.600[1]	1.160[1]
8-4600, 4700, 4800	Std	N	1.600	CNS	4.785	1.875	45	N	.3722	.0028	.439	42.0[1]	96.0[1]	1.600[1]	1.160[1]	SCS	4.785	1.500	45	N	.3713	.0040	.441	42.0[1]	96.0[1]	1.600[1]	1.160[1]
Cadillac 8-60, 62, 75	Std	N	1.650	1041	4.794	1.875	44		.3420	.0015	.451	62.5	160.0	1.946	1.496	21-4N	4.815	1.500	44		.3418	.0018	.451	62.5	160.0	1.946	1.496
Chevrolet 6-1100, 1500, 1700	Std	N	1.477	8645	6.386	1.875	31	N	.3414	.0019	.328	65.0	163.0	1.858	1.528	21-4N	4.923	1.500	46	N	.3414	.0019	.328	65.0	163.0	1.858	1.528
8-1200, 1600, 1800	Std	N	1.500	8645	4.912	1.720	46	N	.3419	.0019	.399	74.0	164.0	1.696	1.306	21-4N	4.923	1.500	46	N	.3414	.0024	.399	74.0	164.0	1.696	1.306
8-867	Std	N	1.500	AS	4.912	1.720	46	N	.3419	.0019	.399	74.0	164.0	1.696	1.306	AS	4.912	1.500	46	N	.3417	.0024	.399	74.0	164.0	1.696	1.306
Oldsmobile 8-88, Super 88, 98	Std	N	1.800	8645	4.999	1.875	45	N	.3430	.0018	.435	90.0	182.0	1.837	1.437		4.999	1.562	45	N	.3943	.0023	.437	90.0	182.0	1.837	1.437
Pontiac 8-5921, 5924, 5927, 5928	Std	N	1.500	MMS	5.280	1.880	30	N	.3400	.0025	.370	60.0[2]	109.0[2]	1.520[2]	1.150[2]	XCR	5.270	1.600	45	N	.3400	.0030	.370	60.0[2]	109.0[2]	1.520[2]	1.150[2]
STUDEBAKER-PACKARD CORP.																											
Studebaker 6-59-S	NA	N	N	8645	4.343	1.343	45	N	.3120	.0025	.343	51.5	98.0	1.656	1.312	2112	4.343	1.281	45	N	.3120	.0025	.343	51.5	98.0	1.656	1.312
8-59-V	NA	N	1.500	8645	5.156	1.656	45	N	.3430	.0025	.359	50.0	110.0	2.031	1.671	2112N	5.156	1.531	45	N	.3430	.0025	.359	50.0	110.0	2.031	1.671

ABBREVIATIONS

1—Outer spring only; inner spring 25.5 at 1.690 with valve closed and 76.0 at 1.250 with valve open.

2—Outer spring only; inner spring 26.0 at 1.480 with valve closed and 60.0 at 1.110 with valve open.

Al—Alloy iron.
AS—Alloy steel.
Bo—Both intake and exhaust.
CAS—Cast austenitic steel.
CNS—Chrome nickel steel.
E—Exhaust only.
MMS—Manganese moly steel.
N—No or none.
NA—Not available.
SCS—Silichrome steel.
Std—Standard.

For Directory of Car Manufacturers listed above, see Table of Contents

VALVE TIMING, LUBRICATION, AND EXHAUST SYSTEMS

PASSENGER CAR MAKE AND MODEL	VALVE TIMING: Operating Tappet Clearance: Intake	Operating Tappet Clearance: Exhaust	Timing Mark Location	TIMING: Intake: Opens (°B.T.C.)	Intake: Closes (°A.B.C.)	Intake: Duration (Deg.)	Exhaust: Opens (°B.B.C.)	Exhaust: Closes (°A.T.C.)	Exhaust: Duration (Deg.)	Valve Opening Overlap (Deg.)	LUBRICATION SYSTEM: Lubrication—Type: Mains, Conn. Rod, Camshaft Brgs.	Piston Pins	Tappets	Timing Gear or Chain	Cylinder Walls	Oil Pump Type	Normal Oil Pressure Lb. at Rpm.	Oil Pressure Sending Unit	Type Oil Intake	Oil Filter System	Filter Replacement	Capacity of Crankcase, Less Filter—qt.	Range in Oil Grade Recommended (S.A.E. Nos.) Summer to Subzero	EXHAUST SYSTEM: Type	Muffler Type	Exhaust Pipe Diameter (in.)	Tail Pipe Diameter
AMERICAN MOTORS CORP.																											
Rambler ... 6-5900	.016C	.018C	VD	10.0	56.0	246.0	49.0	19.0	248.0	29.0	P	S	S	S	SH	G	50-3000	E	St	PF	Co	4	20-5W	Si	RF	1¾	1½
... 8-5910	.012H	.016H	VD	12.5	51.5	244.0	53.5	10.5	244.0	23.0	P	S	S	S	SH	G	50-3000	E	St	PF	Co	4	20-5W	Si	RF	2	1¾
... 8-5920	.012H	.014H	VD	12.5	51.5	244.0	53.5	10.5	244.0	23.0	P	S	P	S	SH	G	55-3000	E	St	FF	Co	4	20-5W	Si	RF	1⅞	1¾
... 8-5980	Hyd	Hyd	VD	12.5	51.5	244.0	53.5	10.5	244.0	23.0	P	S	P	S	SH	G	55-3000	E	St	FF	Co	4	20-5W	Si	RF	1⅞	1¾
CHRYSLER CORP.																											
Chrysler ... 8-MC1	Hyd	Hyd	VD	15.0	57.0	252.0	57.0	15.0	252.0	30.0	P	Sp	P	MF	Mjs	R	55-2000	M	St	FF	Co	5	30-5W	Si	RF	2½[1]	2
... 8-MC2, MC3	Hyd	Hyd	VD	15.0	57.0	252.0	57.0	15.0	252.0	30.0	P	Sp	P	MF	Mjs	R	55-2000	M	St	FF	Co	5	30-5W	D	RF	2	1¾
... 8-MC3, 300-E	Hyd	Hyd	VD	20.0	60.0	260.0	58.0	22.0	260.0	42.0	P	Sp	P	MF	Mjs	R	55-2000	M	St	FF	Co	5	30-5W	D	RF	2¼	2
De Soto ... 8-MS1, MS2, MS3	Hyd	Hyd	VD	15.0	57.0	252.0	57.0	15.0	252.0	30.0	P	Sp	P	MF	Mjs	R	55-2000	M	St	FF	Co	5	30-5W	Si	RF	2½[1]	2
... 8-MS3 Adventurer	Hyd	Hyd	VD	20.0	60.0	260.0	58.0	22.0	260.0	42.0	P	Sp	P	MF	Mjs	R	55-2000	M	St	FF	Co	5	30-5W	D	RF	2¼	2
Dodge ... 6-MD1	.010H	.010H	VD	12.0	44.0	236.0	50.0	6.0	236.0	18.0	P	Mjs	JS	MF	Mjs	R	45-1500	M	St	BP	El	5	30-5W	Si	RF	2	1¾
... 8-MD2	Hyd	Hyd	VD	14.0	54.0	248.0	56.0	12.0	248.0	26.0	P	Mjs	P	MF	Mjs	R	55-2000	M	St	Sh	El	5	30-5W	Si	RF	2¼[2]	2
... 8-MD3	Hyd	Hyd	VD	15.0	57.0	252.0	57.0	15.0	252.0	30.0	P	S	P	MF	Mjs	R	55-2000	M	St	FF	Co	5	30-5W	Si	RF	2½[1]	2
Imperial ... 8-MY1	Hyd	Hyd	VD	15.0	57.0	252.0	57.0	15.0	252.0	30.0	P	Sp	P	MF	Mjs	R	55-2000	M	St	FF	El	5	30-5W	D	RF	2	1¾
Plymouth ... 6-MP1	.010H	.010H	VD	12.0	44.0	236.0	50.0	6.0	236.0	18.0	P	Mjs	JS	MF	Mjs	R	45-1500	M	St	BP	Co	5	30-5W	Si	RF	2	1¾
... 8-MP2-L, MP2-M, MP2-H	.010H	.018H	FDP	17.0	47.0	244.0	55.0	9.0	244.0	26.0	P	Mjs	P	MF	Mjs	R	55-2000	M	St	Sh	El	5	30-5W	SC	RF	2¼[2]	2
... 8-MP2-P	.010H	.018H	FDP	13.0	55.0	248.0	51.0	17.0	248.0	30.0	P	Mjs	P	MF	Mjs	R	55-2000	M	St	Sh	El	5	30-5W	D	RF	2	2
FORD MOTOR CO.																											
Edsel ... 6-Ranger	.019H	.019H	VD	17.0	53.0	250.0	61.0	9.0	250.0	26.0	P	OM	Gr	S	PS	G	50-2000	E	St	FF	Co	4	20-5W	Si	RF	2	1¾
... 8-Ranger	.019H	.019H	VD	12.0	54.0	246.0	58.0	8.0	246.0	20.0	P	OM	Gr	S	PS	R	50-2000	E	St	FF	Co	5	20-5W	Si	RF	2¼[3]	2
... 8-Corsair	Hyd	Hyd	VD	22.0	68.0	270.0	68.0	22.0	270.0	44.0	P	OM	P	PSp	PS	R	50-2000	E	St	FF	Co	5	20-5W	Si	RF	2¼[3]	2
Ford ... 6-Custom 300, Fairlane, Fairlane 500	.019H	.019H	VD	17.0	53.0	250.0	61.0	9.0	250.0	26.0	P	OM	Gr	S	PS	G	50-2000	E	St	FF	Co	4	20-5W	Si	RF	2	1¾
... 8-Custom 300, Fairlane, Fairlane 500	.019H	.019H	VD	12.0	54.0	246.0	58.0	8.0	246.0	20.0	P	OM	Gr	S	PS	R	50-2000	E	St	FF	Co	5	20-5W	Si	RF	2½	2
... 8-Thunderbird	Hyd	Hyd	VD	22.0	68.0	270.0	68.0	22.0	270.0	44.0	P	OM	P	Gr	PS	R	50-2000	E	St	FF	Co	5	20-5W	D	RF	2	1¾
Lincoln ... 8-Lincoln, Premiere, Continental	Hyd	Hyd	VD	22.0	68.0	270.0	63.0	27.0	270.0	49.0	P	OM	P	Gr	PS	R	50-2000	E	St	FF	Co	5	20-5W	D	RF	2	2
Mercury ... 8-Monterey	.019H	.019H	VD	18.0	58.0	256.0	66.0	10.0	256.0	28.0	P	OM	Gr	Gr	PS	R	50-2000	E	St	FF	Co	5	20-5W	SC	RF	2¼[1]	2
... 8-Montclair	Hyd	Hyd	VD	22.0	68.0	270.0	63.0	27.0	270.0	49.0	P	OM	P	Gr	PS	R	50-2000	E	St	FF	Co	5	20-5W	SC	RF	2¼[1]	2
... 8-Park Lane	Hyd	Hyd	VD	22.0	68.0	270.0	63.0	27.0	270.0	49.0	P	OM	P	Gr	PS	R	50-2000	E	St	FF	Co	5	20-5W	D	RF	2	1¾
GENERAL MOTORS CORP.																											
Buick ... 8-4400	Hyd	Hyd	HB	25.0	77.0	282.0	65.0	37.0	282.0	62.0	P	S	P	Dfc	SN	G	40-1600	M	St	FF	El	4	20-5W	SC	RF	2	2
... 8-4600	Hyd	Hyd	HB	33.0	77.0	290.0	75.0	44.0	299.0	77.0	P	S	P	Dfc	SN	G	40-1600	M	St	FF	El	4	20-5W	SC	RF	2¼[1]	2
... 8-4700, 4800	Hyd	Hyd	HB	33.0	77.0	290.0	75.0	44.0	299.0	77.0	P	S	P	Dfc	SN	G	40-1600	M	St	FF	El	4	20-5W	D	RF	2	2
Cadillac ... 8-60, 62, 75	Hyd	Hyd	VD	39.0	105.0	324.0	85.0	59.0	324.0	98.0	P	S	P	Mcf	IJ	G	35-30[4]	E	F	PF	El	5	20-5W	D	RF	2	1¾
Chevrolet ... 6-1100, 1500, 1700	Hyd	Hyd	Fly	16.0	48.0	244.0	46.5	17.5	244.0	33.5	P	S	P	NS	Pjc	G	35-3500	E	St	PF	El	5	20-5W	Si	RF	2	1 11/16
... 8-1200, 1600, 1800	Hyd	Hyd	VD	12.5	57.5	250.0	54.5	15.5	250.0	28.0	P	S	P	NS	Pjc	G	35-2000	E	St	FF	El	4	20-5W	SC	RF	2	1 11/16
... 8-867	Hyd	Hyd	VD	12.5	57.5	250.0	54.5	15.5	250.0	28.0	P	S	P	P	Pjc	G	35-2000	E	St	FF	El	5	20-5W	D	RF	2	1 11/16
Oldsmobile ... 8-88, Super 88, 98	Hyd	Hyd	CB	16.0	45.0	......	64.0	20.0		......	P	S	P	P	P	G	40-50[4]	E	St	FF	Co	4	20-5W	SC	RF	2¼[1]	2
Pontiac ... 8-5921, 5924, 5927, 5928	Hyd	Hyd	CPH	22.0	67.0	269.0	63.0	27.0	270.0	49.0	P	S	P	MJ	MJ	G	35-2600	E	F	FF	El	5	20-5W	SC	RF	2¼[1]	2
STUDEBAKER-PACKARD CORP.																											
Studebaker ... 6-59-S	.018C	.018C	VD	15.0	49.0	244.0	54.0	10.0	244.0	25.0	P	DJ	P	DJ	DJ	G	30-2000	E[5]	St	PF	El	5	30-5W	Si	RF	1¾	1¾
... 8-59-V	.024H	.024H	VD	11.0	54.6	245.6	51.6	14.0	245.6	25.0	P	DJ	P	DJ	DJ	G	30-2000	E[5]	St	PF	El	5	30-5W	SC	RF	2[2]	1¾

ABBREVIATIONS

1—Main only; branch, 2.
2—Main only; branch, 1⅞.
3—Main only; branch, 1¾.
4—Miles per hour.
5—Mechanical on Silver Hawk models.
BP—By-pass.
C—Cold.
CB—Crankshaft balancer.
Co—Complete.
CPH—Crankshaft pulley hub.
D—Dual.
Dfc—Drip from front camshaft bearing.
DJ—Directed jet.
E—Electric.
El—Element.
F—Floating.
FDP—Fan drive pulley.
FF—Full flow.
Fly—Flywheel.
G—Gear.
Gr—Gravity.
H—Hot.
HB—Harmonic balancer.
Hyd—Hydraulic valve lifters; automatic take-up.
IJ—Intermediate jet.
JS—Jet spray.
M—Mechanical.
Mcf—Metered centrifugal flow.
MF—Metered flow.
MJ—Metered jet.
Mjs—Metered jet spray.
NS—Nozzle sprayed.
OM—Oil mist.
P—Pressure.
PF—Partial flow.
Pjc—Pressure jet, cross sprayed.
PS—Pressure stream.
PSp—Pressure spray.
R—Rotary.
RF—Reverse flow.
S—Splash.
SC—Single with cross over.
Sh—Shunt.
SH—Squirt holes in connecting rod.
Si—Single.
SN—Splash and nozzle.
Sp—Spray.
St—Stationary.
VD—Vibration dampener.

For Directory of Car Manufacturers listed above, see Table of Contents

FUEL AND COOLING SYSTEMS

PASSENGER CAR MAKE AND MODEL	FUEL SYSTEM													COOLING SYSTEM														
				Fuel Pump		Carburetor						Air Cleaner Type			Thermostat				Capacity				Radiator Hose					
																							Lower		Upper		By-Pass	
	Induction Type	Fuel Tank Capacity (Gal.)	Fuel Filter Type	Pressure Range (lb.)	Vacuum Booster	Make	Model Number	Number Used	Type	Barrel Size (in.)	Choke—Type	Standard	Optional	Radiator Cap Relief Valve Pressure (lb.)	Type	Starts to Open at (Deg.)	By-Pass Recirculation—Type	Radiator Core Type	With Heater (qt.)	Without Heater (qt.)	Full Length Water Jackets	Water All Around Cylinder	Number and Type	Inside Diameter	Number and Type	Inside Diameter	Number and Type	Inside Diameter
AMERICAN MOTORS CORP.																												
Rambler 6-5900	Car	20	PDM	4-5½	Std	Cart	YF-2014-S	1	SB	1.4400	Aut	CFE	OB	13	Ch	177	N	TF	12.0	11.0	Y	N	1 Mo	1¼	1 Mo	1½	N	....
6-5910	Car	20	Cer	4-5½	Std	Hol	1904-FC	1	SB	1.4375	Aut	CFE	OB	13	Ch	177	N	TF	11.0	10.0	Y	N	1 Mo	1¼	1 Mo	1½	N	....
8-5920	Car	20	Cer	4-5½	Std	Hol	4150-C[1]	1	FB	1.4375	Aut	CFE	N	13	Ch	177	In	TF	21.0	20.0	Y	Y	1 Mo	1½	1 Mo	1¾	N	....
8-5980	Car	20	Cer	4-5½	Std	Hol	4150-C[1]	1	FB	1.4375	Aut	CFE	N	13	Ch	177	In	TF	20.0	19.0	Y	Y	1 Mo	1½	1 Mo	1¾	N	....
CHRYSLER CORP.																												
Chrysler 8-MC1	Car	23	P-C	6-7	N	Cart	BBD-2872-S	1	Du	1.5625	Sep	PE	N	14	CP	180	In	C-F	18.0	17.0	N	Y	1 Mo	1¾	1 Mo	1½	N	....
8-MC2, MC3	Car	23	PP	6-7	N	Cart	AFB-2797-S	1	FB	1.4375[3]	Sep	PE	N	14	CP	180	In	C-F	17.0	16.0	N	Y	1 Mo	1¾	1 Mo	1½	N	....
8-MC3, 300-E	Car	23	PP	6-7	N	Cart	AFB-2798-S[2]	2	FB	1.4375[3]	Int	PE	N	14	CP	180	In	C-F	17.0	16.0	N	Y	1 Mo	1¾	1 Mo	1½	N	....
De Soto 8-MS1	Car	20	PC	6-7	N	Cart	BBD-2870-S	1	Du	1.5625	Sep	PE	N	14	CP	180	In	C-F	17.0	16.0	N	Y	1 Mo	1½	1 Mo	1½	N	....
8-MS2	Car	23	PP	6-7	N	Cart	BBD-2871-S	1	Du	1.5625	Sep	PE	N	14	CP	180	In	C-F	16.0	15.0	N	Y	1 Mo	1½	1 Mo	1½	N	....
8-MS3	Car	23	PP	6-7	N	Cart	AFB-2794-S	1	FB	1.4375[3]	Sep	PE	N	14	CP	180	In	C-F	16.0	15.0	N	Y	1 Mo	1½	1 Mo	1½	N	....
8-MS3 Adventurer	Car	23	PP	6-7	N	Cart	AFB-2790-S[4]	2	FB	1.4375[3]	Int	PE	N	14	CP	180	In	C-F	16.0	15.0	N	Y	1 Mo	1½	1 Mo	1½	N	....
Dodge 6-MD1	Car	20	PI	6-7	N	Cart	BBS-2567-S	1	SB	1.6875	Int	PE	N	14	CP	160	In	C-F	14.0	13.0	Y	N	1 Mo	1½	1 Mo	1½	N	....
8-MD2	Car	20	PC	6-7	N	Str	WW3-164	1	Du	1.4375	Int	PE	N	14	CP	180	In	C-F	21.0	20.0	Y	Y	1 Mo	1½	1 Mo	1½	N	....
8-MD3-L, MD3-M	Car	20	PC	6-7	N	Cart	BBD-2870-S	1	Du	1.5625	Sep	PE	N	14	CP	180	In	C-F	17.0	16.0	N	Y	1 Mo	1½	1 Mo	1½	N	....
8-MD3-H	Car	20	PC	6-7	N	Cart	AFB-2773-S	1	FB	1.4375	Sep	PE	N	14	CP	180	In	C-F	17.0	16.0	N	Y	1 Mo	1½	1 Mo	1½	N	....
Imperial 8-MY1	Car	23	PP	6-7	N	Cart	AFB-2797-S	1	FB	1.4375[3]	Sep	PE	N	14	CP	180	In	C-F	17.0	16.0	N	Y	1 Mo	1¾	1 Mo	1½	N	....
Plymouth 6-MP1	Car	20	PI	6-7	N	Cart	BBS-2567-S	1	SB	1.6875	Int	PE	N	14	CP	160	In	C-F	14.0	13.0	Y	N	1 Mo	1½	1 Mo	1½	N	....
8-MP2-L, MP2-M, MP2-H	Car	20	PC	6-7	N	Cart	BBD-2864-S	1	Du	1.4375	Sep	PE	N	14	CP	180	Ex	C-F	21.0	20.0	Y	Y	1 Mo	1½	1 Mo	1½	1 Mo	11/16
8-MP2-P	Car	20	PC	6-7	N	Cart	AFB-2813-S	1	FB	1.4375	Sep	PE	N	14	CP	180	Ex	C-F	21.0	20.0	Y	Y	1 Mo	1½	1 Mo	1½	1 Mo	11/16
FORD MOTOR CO.																												
Edsel 6-Ranger	Car	20	AF	4-5	Std	Hol	....	1	SB	1.5625	Man	....	....	14	Po	177	In	TF	16.0	15.0	Y	Y	1 Mo	1¾	1 Mo	1½	N	....
8-Ranger	Car	20	AF	4½-5½	Std	F-H	....	1	Du	1.4375	Aut	....	N	14	CP	177	Ex	TF	20.0	19.0	Y	Y	1 Mo	2	1 Mo	1½	1 St	⅝
8-Corsair	Car	20	AF	4½-5½	Std	F-H	....	1	Du	1.4375	Aut	....	N	14	CP	177	Ex	TF	20.0	19.0	Y	Y	1 Mo	2	1 Mo	1½	1 St	⅞
Ford 6-Custom 300, Fairlane, Fairlane 500	Car	20	AF	4-5	Std	Hol	....	1	SB	1.5625	Man	....	....	14	Po	177	In	TF	16.0	15.0	Y	Y	1 Mo	1¾	1 Mo	1½	N	....
8-Custom 300, Fairlane, Fairlane 500	Car	20	AF	4½-5½	Std	F-H	....	1	Du	1.4375	Aut	....	....	14	Po	177	Ex	TF	20.0	19.0	Y	Y	1 Mo	2	1 Mo	1½	1 St	⅝
8-Thunderbird	Car	20	AF	4½-5½	Opt	F-H	....	1	FB	1.5000	Aut	....	....	14	Po	177	Ex	TF	20.5	19.5	Y	Y	1 Mo	2	1 Mo	2	1 St	⅞
Lincoln 8-Lincoln, Premiere, Continental	Car	22	PBF	5-6	Std	Cart	2853-S	1	FB	1.5620[6]	Aut	PE	N	14	Ch	177	Ex	TF	26.0	23.0	Y	Y	1 Mo	2	1 Mo	1¾	1 St	⅞
Mercury 8-Monterey	Car	20	PF	4½-5½	N	Hol	2300	1	Du	1.4370	Aut	PE	N	14	Ch	177	Ex	TF	21.0	20.0	Y	Y	1 Mo	2	1 Mo	1½	1 Mo	⅝
8-Montclair	Car	20	PFC	5-6	N	For	5752425	1	FB	1.5620	Aut	PE	N	14	Ch	177	Ex	TF	22.0	21.0	Y	Y	1 Mo	2	1 Mo	1¾	1 St	⅞
8-Park Lane	Car	20	PFC	5-6	N	Cart	AFB-2853-S	1	FB	1.5620[6]	Aut	PE	N	14	Ch	177	Ex	TF	22.0	21.0	Y	Y	1 Mo	2	1 Mo	1¾	1 St	⅞
GENERAL MOTORS CORP.																												
Buick 8-4400	Car	20	....	5¼-6½	N	Str	....	1	Du	1.4380	Aut	AE	N	15	Bp	167	In	TC	19.0	16.5	N	Y	1 Mo	1 9/16	1 Mo	1 9/16	N	....
8-4600, 4700, 4800	Car	20	....	5¼-6½	N	Cart	....	1	FB	1.5625[6]	Aut	AE	N	15	Bp	167	In	TC	19.0	16.5	N	Y	1 Mo	1 9/16	1 Mo	1 9/16	N	....
Cadillac 8-60, 62	Car	21	....	5¼-6½	....	C-R	2814-S[7]	1	FB	1.4375[6]	Int	....	N	14	Ch	163	In	TC	19.3	18.5	Y	Y	1 Mo	1¾	1 Mo	1¾	N	....
8-75	Car	21	....	5¼-6½	....	C-R	2814-S[7]	1	FB	1.4375[6]	Int	....	N	14	Ch	163	In	TC	20.8	18.5	Y	Y	1 Mo	1¾	1 Mo	1¾	N	....
Chevrolet 6-1100, 1500, 1700	Car	20	S-Sb	3½-4½	N	Roc	7013003	1	SB	1.5625	Aut	OW	OB	13	Ch	167	In	TC	18.0	17.0	Y	Y	1 Mo	1¾	1 Mo	1½	N	....
8-1200, 1600, 1800	Car	20	S-Sb	5¼-6½	N	Roc	7013007	1	Du	1.4375	Aut	....	N	13	Ch	167	In	TC	18.5	17.5	Y	Y	1 Mo	1¾	1 Mo	1½	N	....
8-867	Car	16½	Sb	5¼-6½	N	Cart	3756676	1	FB	1.3100	Aut	OW	....	7	Ch	160	In	Cel	16.5	15.5	Y	Y	1 Mo	1¾	1 Mo	1½	N	....
Oldsmobile 8-88	Car	20	A-S	5-6	Opt	Roc	2-GC	1	Du	1.6875	Aut	AE	PE	13	Ch	157	In	TC	21.0	20.0	Y	Y	1 Mo	1¾	1 Mo	1¾	N	....
8-Super 88, 98	Car	20	A-S	5-6	Opt	Roc	4-GC	1	FB	1.5625[6]	Aut	PE	N	13	Ch	157	In	TC	21.0	20.0	Y	Y	1 Mo	1¾	1 Mo	1¾	N	....
Pontiac 8-5921, 5924	Car	21½	P-P	5¼-6½	N	Roc	7013061	1	Du	1.6875	Aut	OE	PE	14	Ch	170	In	TC	22.4	21.4	Y	Y	1 Mo	2	1 Mo	1¾	N	....
8-5927, 5928	Car	21½	P-P	5¼-6½	N	Cart	AFB-2820-S	1	FB	1.4375[6]	Aut	OE	PE	14	Ch	170	In	TC	22.4	21.4	Y	Y	1 Mo	2	1 Mo	1¾	N	....
STUDEBAKER-PACKARD CORP.																												
Studebaker 6-59-S	Car	18	Scr	3½-5½	N	Cart	AS-2876-S	1	SB	1.2500	Aut	Pp	OB	14	Ch	170	In	C-T	12.0	11.0	Y	N	1 Mo	1¼	1 Mo	1¼	N	....
8-59-V	Car	18	Cer	3½-5½	N	Str	WW6-123	1	Du	1.2500	Aut	Pp	OB	14	Ch	170	In	C-T	18.0	17.0	Y	Y	1 Mo	1½	1 Mo	1½	N	....
6-59-S Silver Hawk	Car	18	Scr	3½-5½	N	Cart	AS-2876-S	1	SB	1.2500	Aut	Pp	OB	14	Ch	170	In	C-T	12.0	11.0	Y	N	1 Mo	1¼	1 Mo	1¼	N	....
8-59-V Silver Hawk	Car	18	Cer	3½-5½	N	Str	WW6-123	1	Du	1.2500	Aut	Pp	OB	14	Ch	170	In	C-T	18.0	17.0	Y	N	1 Mo	1½	1 Mo	1½	N	....

ABBREVIATIONS

1—Early production; later production, 4160.
2—Front only; rear, AFB-2799-S.
3—Primary only; secondary, 1.5625.
4—Front only; rear, AFB-2791-S.
6—Primary only; secondary, 1.6875.
7—Carter only; Rochester, 7013030.
AE—Aluminum foil element.
AF—Accreted fiber.
A-S—Accreted in fuel pump and saran in fuel tank.
Aut—Automatic.
Bp—By-pass.
Car—Carburetor.
Cart—Carter.
Cel—Cellular.
Cer—Ceramic.
C-F—Cellular tubular and fin and tube.
CFE—Cellulose fiber element.
Ch—Choke.
CP—Choke pellet.
C-R—Carter or Rochester.
C-T—Cellular tubular.
Du—Dual.
Ex—External.
FB—Four barrel.
F-H—Ford or Holley.
For—Ford.
Hol—Holley.
In—Internal.
Int—Integral.
Man—Manual.
Mo—Molded.
N—No or none.
OB—Oil bath.
OE—Oiled element.
Opt—Optional.
OW—Oil wetted.
PBF—Plastic screen, brass screen and felted fiber.
PC—Plastic and ceramic.
P-C—Plastic in fuel tank and ceramic at carburetor.
PDM—Paper discs and magnet.
PE—Paper element.
PF—Porous fiber.
PFC—Plastic mesh, felted fiber and copper screen.
PI—Plastic.
Po—Poppet pellet.
Pp—Plasticized paper.
PP—Plastic and paper.
P-P—Plastic fiber in fuel tank and porous paper at carburetor.
Roc—Rochester.
Sb—Sintered bronze.
SB—Single barrel.
Scr—Screen.
Sep—Seperate.
S-Sb—Screen in fuel tank; sintered bronze filter at carburetor.
St—Straight.
Std—Standard.
Str—Stromberg.
TC—Tube and center.
TF—Tube and fin.
Y—Yes.

For Directory of Car Manufacturers listed above, see Table of Contents

FAN, BATTERY, AND ELECTRICAL SUPPLY SYSTEM

PASSENGER CAR MAKE AND MODEL	FAN: Number of Blades	FAN: Spacing (deg.)	FAN: Diameter (in.)	FAN: Ratio—Fan to Crankshaft rev.	FAN: Cutout Type	FAN: Bearing Type	BATTERY: Make	BATTERY: Model	BATTERY: Voltage Rating	BATTERY: Plates per Cell—Amp. Hour Rating	BATTERY: Terminal Grounded	Generator: Make	Generator: Model	Generator: Type	Generator: Ratio—Gen to Cr's rev. (To—1)	Generator: Cut-in Engine RPM	Regulator: Make	Regulator: Model	Regulator: Type	Cut-out Relay: Closing Voltage at Generator R.P.M.	Cut-out Relay: Reverse Current to Open (amp.)	Regulated: Voltage	Regulated: Current	Voltage Test Conditions: Temperature (deg.)	Voltage Test Conditions: Load	Voltage Test Conditions: Other
AMERICAN MOTORS CORP.																										
Rambler 6-5900	4		14	1.22	N	B	AL	11-MS-40	12	7-40	Neg	DR	1100304	Sh	2.08	570	DR	1119122	CV	12.8-1300	1-3½	14.5	25	H	10 amp	
6-5910	4		14	1.22	N	B	AL	11-MS-45	12	7-45	Neg	DR	1100304	Sh	2.08	570	DR	1119122	CV	12.8-1300	1-3½	14.5	25	H	10 amp	
8-5920	4		18	.92	N	B	AL	11-HS-50	12	9-50	Neg	DR	1100304	Sh	2.34	480	DR	1119122	CV	12.8-1300	1-3½	14.5	25	H	10 amp	
8-5980	4		18	.92	N	B	AL	11-HS-60	12	11-60	Neg	DR	1102018	Sh	2.34	485	DR	1119003	CV	12.8-1300	1-3½	14.5	30	H	10 amp	
CHRYSLER CORP.																										
Chrysler 8-MC1, MC2, MC3	4	17, 104	18	.95	N	B	W-A	HO-12-70[2]	12	13-70	Neg	AL	GJM-8001A	Sh	2.12	560	AL	VRX-6301A	CV	12.6-13.6-1200	0-6	12.0	35	70F	7 amp	RV
8-MC3, 300-E	5	(1)	18	.95	SF	B	W-A	HO-12-70[2]	12	13-70	Neg	AL	GJM-8001A	Sh	2.12	560	AL	VRX-6301A	CV	12.6-13.6-1200	0-6	12.0	35	70F	7 amp	RV
De Soto 8-MS1, MS2, MS3	4	76, 104	18	.95	N	B	W-A	HO-11-60[3]	12	11-60	Neg	AL	GJM-8001A	Sh	2.12	560	AL	VRX-6301A	CV	12.6-13.6-1040	0-6	12.0	35	70F	7 amp	RV
Dodge 6-MD1	4	76, 104	17	.95	N	B	Gou	11-OE-50	12	9-50	Neg	AL	GJM-8001A	Sh	2.12	560	AL	VRX-6301A	CV	12.6-13.6-1480	0-6	12.0	35	70F	7 amp	RV
8-MD2	4	76, 104	18	.95	N	B	Gou	11-OE-50	12	9-50	Neg	AL	GJM-8001A	Sh	2.12	560	AL	VRX-6301A	CV	12.6-13.6-1480	0-6	12.0	35	70F	7 amp	RV
8-MD3	4	76, 104	18	.95	N	B	Gou	11-OE-60	12	11-60	Neg	AL	GJM-8001A	Sh	2.12	560	AL	VRX-6301A	CV	12.6-13.6-1040	0-6	12.0	35	70F	7 amp	RV
Imperial 8-MY1	4	76, 104	18	.95	N	B	W-A	HO-12-70[2]	12	13-70	Neg	AL	GHM-8005A	Sh	2.12	375	AL	VRX-6201A	CV	12.6-13.6-1040	0-6	12.0	35	70F	7 amp	RV
Plymouth 6-MP1	4	76, 104	17	.95	N	B	AL	11-HS-50	12	9-50	Neg	AL	GJM-8001-A	Sh	2.12	1200	AL	VRX-6301-A	CV	12.6-13.6-1480	0-6	12.0	35	70F	7 amp	RV
8-MP2	4	76, 104	18	.95	N	B	AL	11-HS-50	12	9-50	Neg	AL	GJM-8001-A	Sh	2.00	1200	AL	VRX-6301-A	CV	12.6-13.6-1480	0-6	12.0	35	70F	7 amp	RV
FORD MOTOR CO.																										
Edsel 6-Ranger	4		17½	.95	N	B	Var		12	11-55	Neg	Fo	FHA-10000-A	Sh	2.00	675	F-A	2900424[4]	TC	12.4-13.2-1200	6-9	14.6-15.4	28-32	75F	5 amp	
8-Ranger, Corsair	4		18½	.90	N	B	Var		12	11-55	Neg	Fo	2900643	Sh	2.25	555	F-A	2900424	TC	12.4-13.2-1100	6-9	14.6-15.4	28-32	75F	5 amp	N
Ford 6-Custom 300, Fairlane, Fairlane 500	4		17½	.95	N	B	Var		12	11-55	Neg	Fo	FHA-10000-A	Sh	2.00	675	F-A	2900424[4]	TC	12.4-13.2-1200	6-9	14.6-15.4	28-32	75F	5 amp	
8-Custom 300, Fairlane, Fairlane 500	4		18½	.90	N	B	Var		12	11-55	Neg	Fo	FAS-10000-E	Sh	2.25	600	F-A	2900424[4]	TC	12.4-13.2-1200	6-9	14.6-15.4	28-32	75F	5 amp	
8-Thunderbird	4		18½	.90	N	B	Var		12	11-55	Neg	Fo	2900642	Sh	2.00	625	F-A	2900424[4]	TC	12.4-13.2-1300	6-9	14.6-15.4	28-32	75F	5 amp	30 amp
Lincoln 8-Lincoln, Premiere, Continental	4	76, 104	18¼	.93	N	B	Var	FDU-10655-F	12	13-70	Neg	Fo	FGV-10000-A	Sh	2.25	650	F-A	2900563[5]	TC	12.4-13.2-1250	2-6	14.6-15.4	38-42	75F	5 amp	40 amp
Mercury 8 Monterey	4	76, 104	18½	.97	N	B	Var		12	11-55	Neg	Fo	FAS-10000-E	Sh	2.25	558	F-A	2900424[4]	TC	12.0-12.8-1300	2-6	14.6-15.4	28-32	75F	5 amp	30 amp
8 Montclair, Park Lane	4	76, 104	18½	.93	N	B	Var		12	13-65	Neg	Fo	2900219	Sh	2.25	620	F-A	2900305	TC	12.4-13.2-1350	2-6	14.6-15.4	28-32	75F	5 amp	35 amp
GENERAL MOTORS CORP.																										
Buick 8-4400, 4600, 4700, 4800	4	76, 104	18½	.92	N	B	DR		12	11-70	Neg	DR	1102147	Sh	2.40	514	DR	1119242	CV	11.8-13.6-1450	1-6	14.0-15.0	31-36	125F	10 amp	BC
Cadillac 8-60, 62	4	78	18¼	.96	N	N	DR		12	11-70	Neg	DR	1102140	TP	2.42		DR	1119002		11.8-13.5	0-4	13.8-14.8	32-37			
8-75	7	45, 60	18	.96	N	N	DR		12	11-70	Neg	DR	1102140	TP	2.42		DR	1119002		11.8-13.5	0-4	13.8-14.8	32-37			
Chevrolet 6-1100, 1500, 1700	4		17⅝	.95	N	B	DR	1980458	12	9-53	Neg	DR	1102096	Sh	2.30	510	DR	1119001	Vib	11.8-13.5-1300		13.8-14.8	27-33	OT	10 amp	N
8-1200, 1600, 1800	4		17⅝	.95	N	B	DR	1980458	12	9-53	Neg	DR	1102097	Sh	2.30	510	DR	1119001	Vib	11.8-13.5-1300		13.8-14.8	27-33	OT	10 amp	N
8-867	4		17	.95	N	B	DR	1980458	12	9-53	Neg	DR	1102043	Sh	2.00	620	DR	1119001	Vib	11.8-13.5-1300		13.8-14.8	27-33	OT	10 amp	N
Oldsmobile 8-88, Super 88, 98	4	76, 104	18	.82	N	B	DR		12	11-70	Neg	DR	1102092	Sh	2.24	525	DR	1119002		11.8-13.5		13.8-14.8	32-37	OT	10 amp	
Pontiac 8-5921, 5924, 5927, 5928	4	76, 104	19	.88	N	B	DR	458	12	9-53	Neg	DR	1102142	Sh	2.60	480	DR	1119001	CV	11.8-13.6-1250		14.0	30	125F	10 amp	
STUDEBAKER-PACKARD CORP.																										
Studebaker 6-59S	4	76, 104	17⅛	.94	N	B	Wil	HO-11-50	12	9-50	Neg	AL	GJC-7002-F	Sh	2.00	665	AL	VRX-6008-A	CV	13.0-13.8-1330		14.2-15.0	30	70F	10 amp	3500[6]
8-59V	4	76, 104	20[7]	.87	N	B	Wil	HO-11-50	12	9-50	Neg	DR	1102003	Sh	2.19	570	DR	1119123	CV	13.8-14.8-1250		14.7-15.7	30	70F	10 amp	3500[6]

ABBREVIATIONS

1—46, 92, 65, 65, 92.
2—Willard only; Auto-Lite, 12-H-70.
3—Willard only; Auto-Lite, 11-HS-60.
4—Ford only; American Bosch, 2700015.
5—Ford only; American Bosch, 2700017.
6—Revolutions per minute.
7—Lark only; Hawk, 18¼.
AL—Auto-Lite.
amp—Amperes.
B—Ball.
BC—Battery in circuit.
CV—Current and voltage control.
DR—Delco-Remy.
F—Degrees fahrenheit.
F-A—Ford or American Bosch.
Fo—Ford.
Gou—Gould.
H—Hot.
N—None.
Neg—Negative.
OT—Operating temperature.
RV—Rated voltage.
SF—Silent-Flite.
Sh—Shunt.
TC—Three coil.
TP—Two pole.
Var—Various.
Vib—Vibrator.
W-A—Willard or Auto-Lite
Wil—Willard.

For Directory of Car Manufacturers listed above, see Table of Contents

STARTING AND IGNITION SYSTEMS

PASSENGER CAR MAKE AND MODEL 10	STARTING SYSTEM																IGNITION SYSTEM												
	MOTOR											DRIVE				COIL				DISTRIBUTOR								
					Lock Test			No Load Test					Number Teeth					Amps.				Spark Advance Data (Crankshaft Degrees)						
																						Centrifugal Advance (at RPM)		Vacuum Advance (Inches of Mercury)				
	Make	Model	Engine Cranking Speed (RPM)	Test Conditions	Amps.	Volts	Torque (ft. lb.)	Amps.	Volts	RPM (min.)	Starting Procedure	Engagement—Type	Pinion	Flywheel	Flywheel Tooth Face Width	Make	Model	Engine Stopped	Engine Idling	Make	Model	Start	Maximum	Start	Maximum	Breaker Gap (in.)	Cam Angle (deg.)	Breaker Arm Tension (oz.)
AMERICAN MOTORS CORP.																												
Rambler 6-5900	DR	1107731			385	3.5	10.5	112	10.6	3240	Tik	SA	9	149	.440	DR	1115047	2.75	1.45	DR	1112426	0°-850	14.0°-4000	0°-5.0	11.0°-11.0	.016	32	21
6-5910	DR	1107731			385	3.5	10.5	112	10.6	3240	Tik	SA	9	149	.438	DR	1115094	3.75	1.70	DR	1110246	0°-1000	22.0°-4200	0°-6.0	22.0°-16.5	.016	32	21
8-5920	DR	1107704			310	4.3	10.5	76	10.6	6200	Tik	SA	9	176	.438	DR	1115105	3.75	2.30	DR	1110923	0°-650	36.0°-4000	0°-6.5	24.0°-14.0	.016	30	21
8-5980	DR	1107717			360	3.5	10.5	100	10.6	3600	Tik	SA	9	176	.438	DR	1115105	3.75	2.30	DR	1110887	0°-600	36.0°-3800	0°-6.0	20.0°-15.0	.016	30	21
CHRYSLER CORP.																												
Chrysler 8-MC1, MC2	AL	MDT-6002	150	CW	350	4.0	8.5	80	11.0	3800	Tik	SP	9	172	.375	AL	CAH-4001	3.10	2.50	AL	IBP-4006	0°-795	15.0°-4700	0°-7.6	22.0°-16.4	.017	30	19
8-MC3	AL	MDT-6002	150	CW	350	4.0	8.5	80	11.0	3800	Tik	SP	9	172	.375	AL	CAH-4001	3.10	2.50	AL	IBS-4010A	0°-695	19.0°-4300	0°-6.6	26.0°-16.4	.017	30	19
8-MC3 300-E	AL	MDT-6002	150	CW	350	4.0	8.5	80	11.0	3800	Tik	SP	9	172	.375	AL	CAH-4001	3.10	2.50	AL	IBS-4010	0°-800	13.0°-2100	0°-7.8	26.0°-18.2	.017	30	19
De Soto 8-MS1	AL	MDT-6001	150	CW	350	4.0	8.5	58	11.0	3800	Tik	In	9	172	.375	AL	CAH-4001	3.10	2.50	AL	IBP-4005B	0°-700	19.0°-4300	0°-7.1	22.0°-14.5	.017	30	19
8-MS2, MS3	AL	MDT-6002	150	CW	350	4.0	8.5	80	11.0	3800	Tik	SP	9	172	.375	AL	CAH-4001	3.10	2.50	AL	IBP-4005B	0°-700	19.0°-4300	0°-7.1	22.0°-14.5	.017	30	19
8-MS3 Adventurer	AL	MDT-6002	150	CW	350	4.0	8.5	80	11.0	3800	Tik	SP	9	172	.375	AL	CAH-4001	3.10	2.50	AL	IBS-4006C	0°-885	19.0°-4000	0°-7.9	26.0°-18.2	.017	30	19
Dodge 6-MD1	AL	MDU-6003	150	CW	355	4.0	9.0	50	11.0	5500	Tik	In	9	172	.375	AL	CAG-4001	2.40	1.80	AL	IBR-4001	0°-700	17.0°-3600	0°-6.0	19.5°-16.0	.020	39	19
8-MD2	AL	MDU-6003	150	CW	355	4.0	9.0	50	11.0	5500	Tik	In	9	172	.375	AL	CAH-4001	3.10	2.50	AL	JBP-4003J	0°-850	13.0°-4600	0°-6.7	20.0°-13.2	.017	30	19
8-MD3	AL	MDT-6001	150	CW	350	4.0	8.5	58	11.0	3800	Tik	In	9	172	.375	AL	CAH-4001	3.10	2.50	AL	JBP-4005B	0°-700	19.0°-4300	0°-7.1	22.0°-14.5	.017	30	19
Imperial 8-MY1	AL	MDT-6002	150	CW	350	4.0	8.5	80	11.0	3800	Tik	SP	9	172	.375	AL	CAH-4001	3.10	2.50	AL	IBS-4010A	0°-695	19.0°-4300	0°-7.1	26.0°-16.4	.017	30	19
Plymouth 6-MP1	AL	MDU-6003	150	CW	355	4.0	9.0	50	11.0	5500	Tik	In	9	172	.375	AL	CAG-4001	2.40	1.80	AL	IBR-4001	0°-700	17.0°-3600	0°-6.0	19.5°-16.0	.020	39	19
8-MP2	AL	MDU-6003	150	CW	355	4.0	9.0	50	11.0	5500	Tik	In	9	172	.375	AL	CAH-4001	3.10	2.50	AL	IBP-4003-F	0°-940	18.0°-4600	0°-6.7	24.8°-16.0	.017	30	19
8-MP2 Sport Fury	AL	MDU-6003	150	CW	355	4.0	9.0	50	11.0	5500	Tik	In	9	172	.375	AL	CAH-4001	3.10	2.50	AL	IBP-4003H	0°-700	17.0°-4400	0°-5.1	20.0°-13.2	.017	30	19
FORD MOTOR CO.																												
Edsel 6-Ranger	Fo	FAR-11001-A	165	85F	550	5.0	15.5	85	12.0	4500	Tik	BF	9	146	.375	F-E	FAC12029A	4.50	2.50	Hol	FET12127C	0°-700	16.0°-2400	19.0°-4.3	22.5°-8.1	.025	37	19
8-Ranger	Fo	FAR-11001-A	165	85F	550	5.0	15.5	85	12.0	4500	Tik	BF	9	146	.375	Fo	FAC12029A	4.50	2.50	H-F	9FA12127A	0°-300	29.0°-4000	0°-1.0	22.0°-15.0	.015	27	19
8-Corsair	Fo	FAR-11001-A	165	85F	550	5.0	15.5	85	12.0	4500	Tik	BF	9	146	.375	Fo	FAC12029A	4.50	2.50	H-F	FEU12127J	0°-300	29.0°-4000	0°-1.0	22.0°-15.0	.015	27	19
Ford 6-Custom 300, Fairlane, Fairlane 500	Fo	FAR-11001-A	165	85F	550	5.0	15.5	85	12.0	4500	Tik	BF	9	146	.375	F-E	FAC12029A	4.50	2.50	Hol	FET12127C	0°-700	16.0°-2400	19.0°-4.3	22.5°-8.1	.025	37	19
8-Custom 300, Fairlane, Fairlane 500	Fo	FAR-11001-A	165	85F	550	5.0	15.5	85	12.0	4500	Tik	BF	9	146	.375	Fo	FAC12029A	4.50	2.50	H-F	B9FA12127A	0°-300	29.0°-4000	0°-1.0	22.0°-15.0	.015	27	19
8-Thunderbird	Fo	FAR-11001-A	165	85F	550	5.0	15.5	85	12.0	4500	Tik	In	9	153	.375	Fo	FAC12029A	4.50	2.50	Fo	FEU12127N	0°-400	28.0°-4000	0°-1.0	18.0°-15.0	.015	27	19
Lincoln 8-Lincoln, Premiere, Continental	Fo	2900550	165	85F	550	5.0	15.5	85	12.0	4500	Tik	BF	9	153	.375	Fo	FAC12029A	4.50	2.50	Fo	FEW12127H	0°-700	29.5°-4000	0°-1.0	22.0°-15.0	.015	27	19
Mercury 8-Monterey	Fo	FAR-11001-A	165	85F	550	5.0	15.5	85	12.0	4500	Tik	BF	9	146	.375	Fo	FAC12029A	4.50	2.50	Fo	B9FA12127A	0°-850	29.0°-4000	0°-1.0	22.0°-15.0	.015	27	19
8-Montclair, Park Lane	Fo	FAR-11001-A	165	85F	550	5.0	15.5	85	12.0	4500	Tik	BF	9	153	.375	Fo	FAC12029A	4.50	2.50	Fo	FEW12127H	0°-700	29.5°-4000	0°-1.0	22.0°-15.0	.015	27	19
GENERAL MOTORS CORP.																												
Buick 8-4400	DR	1107724	160	OT	330	3.5		100	10.6	3600	Dap	SOC	9	166	.573	DR	1115100	4.50	2.50	DR	1110949	0°-625	26.0°-3750	0°-7.5	21.0°-14.0	.015	30	21
8-4600, 4700, 4800	DR	1107739	160	OT	330	2.0		120	10.6	4700	Dap	SOC	9	166	.375	DR	1115100	4.50	2.50	DR	1110936	0°-1250	14.0°-3800	0°-9.0	21.0°-14.5	.015	30	21
Cadillac 8-60, 62, 75	DR	1107657			330	3.5		83	10.6	4350	Tik	SSO	9	176	.500	DR	1115082	2.40	1.25	DR	1110932	1.0°-400	16.0°-2000	0°-8.5	22.0°-16.0	.016	30	21
Chevrolet 6-1100, 1500, 1700	DR	1107652		OT				63	10.6	6550	Tik	SP	9	168	.414	DR	1115120	4.00	1.80	DR	1112403	0°-600	26.0°-3500	0°-6.0	15.0°-8.5	.019	32	21
8-1200, 1600, 1800	DR	1107664		OT				63	10.6	7800	Tik	SP	9	168	.414	DR	1115115	4.00	1.80	DR	1110947	0°-600	28.0°-3750	0°-8.0	15.0°-15.5	.019	30	21
8-867	DR	1107664		OT				75	10.3	6900	Tik	SP	9	168	.414	DR	1115091	4.00	1.80	DR	1110946	0°-600	28.0°-3700	0°-8.0	15.0°-15.5	.018	30	21
Oldsmobile 8-88	DR	1107665	150	RT				83	10.6	3600	Tik	HSO	9	176	.500	DR	1115112	4.50	2.00	DR	1110931	2.0°-800	24.0°-4400	0°-9.0	22.0°-21.0	.016	30	21
8-Super 88	DR	1107716	150	RT				100	10.6	3900	Tik	HSO	9	176	.500	DR	1115112	4.50	2.00	DR	1110931	2.0°-800	24.0°-4400	0°-9.0	22.0°-21.0	.016	30	21
8-98	DR	1107716	150	RT				100	10.6	3900	Tik	HSO	9	176	.425	DR	1115112	4.50	2.00	DR	1110931	2.0°-800	24.0°-4400	0°-9.0	22.0°-21.0	.016	30	21
Pontiac 8-5921, 5924, 5927, 5928	DR	1107661		RT	NR			100	10.6	3600	Tik	SGO	9	176	.500	DR	1115118	3.50	1.20	DR	1110941	0°-650	20.0°-2900	0°-8.0	19.5°-13.5	.016	30	21
STUDEBAKER-PACKARD CORP.																												
Studebaker 6-59S	AL	MBG-4103	170	OT	235	4.0	5.2	55	10.0	5200	Tik	Ben	9	151	.375	AL	CAF4003A		4.00	AL	IAT-4403	0°-800	14.0°-2800	0°-4.0	18.0°-12.0	.020	39	19
8-59V	DR	1107650	160	OT	435	5.8	14.0	75	11.0	5000	Tik	BF	9	162	.375	DR	1115122		3.80	DR	1110864	0°-1000	24.0°-2400	0°-5.0	18.0°-12.0	.016	31	21

ABBREVIATIONS

1—El Dorado models, 1115119.
AL—Auto-Lite.
Ben—Bendix.
BF—Bendix Folo-Thru.
CW—Completely warmed engine.
Dap—Depress accelerator pedal.
DR—Delco-Remy.
F—Degrees fahrenheit.
F-E—Ford or Essex Wire.
Fo—Ford.
H-F—Holley or Ford.
Hol—Holley.
HSO—Helical spline sliding gear and overrunning clutch.
In—Inertia.
NR—Not recommended.
OT—Engine at operating temperature.
RT—Room temperature.
SA—Solenoid actuated.
SGO—Sliding gear and overrunning clutch.
SOC—Solenoid with overrunning clutch.
SP—Solenoid, positive.
SSO—Spiral spline and overrunning clutch.
Tik—Turn ignition key to extreme clockwise position.

For Directory of Car Manufacturers listed above, see Table of Contents

IGNITION TIMING, SPARK PLUGS, AND CLUTCHES

PASSENGER CAR MAKE AND MODEL 11	IGNITION TIMING		SPARK PLUGS				Cylinder Numbering System and Firing Order	Suppression Type	CLUTCH (PEDAL OPERATED)													
														Facing						Release Bearing		
	C/s deg. @ RPM	Mark Location	Make and Model	Thread (mm)	Tightening Torque (ft. lb.)	Gap			Make	Type	Type Pressure Plate Springs	Total Plate Pressure	Number of Driven Discs	Material	Inside Diam. (In.)	Outside Diam. (In.)	Effective Area (Sq. In.)	Thickness (In.)	Engagement Cushioning Method	Type	Method of Lubrication	Torsional Dampening Method
AMERICAN MOTORS CORP.																						
Rambler 6-5900	3B-...	VD	AL-AL-7[1]	14	30	.035	1,5,3,6,2,4	HT	BB	D	Co	1215	1	......	5.4	8.0	55.2	.125	Cfs	Ba	P	SSS
6-5910	5B-...	VD	AL-AL-7[1]	14	30	.035	1,5,3,6,2,4	HT	BB	D	Co	1446	1	......	5.2	8.5	72.2	.135	Cfs	Ba	P	SSS
8-5920	TC-...	VD	AL-AL-7[1]	14	30	.035	1L,8R,4R,3L,6R,5L,7L,2R	Dis	BB	D	Co	1444	1	......	7.0	10.0	80.1	.125	Cfs	Ba	P	SSS
8-5980	5B-...	VD	AL-AL-7[1]	14	30	.035	1L,8R,4R,3L,6R,5L,7L,2R	Dis	BB	D	Co	1893	1	......	6.5	10.5	106.8	.125	Cfs	Ba	P	SSS
CHRYSLER CORP.																						
Chrysler 8-MC1	10B-500	VD	AL-A-42	14	31	.035	1L,8R,4R,3L,6R,5L,7L,2R	SP,Dis	BB	D	Co	2013	1	MWA	6.5	10.5	106.8	.125	Cfs	Ba	P	CS
8-MC2, MC3	10B-500	VD	AL-A-42	14	31	.035	1L,8R,4R,3L,6R,5L,7L,2R	SP,Dis	N													
8-MC3 300-E	10B-700	VD	AL-A-32	14	31	.035	1L,8R,4R,3L,6R,5L,7L,2R	SP,Dis	N													
De Soto 8-MS1	10B-500	VD	AL-A-42	14	31	.035	1L,8R,4R,3L,6R,5L,7L,2R	SP,Dis	BB	D	Co	2013	1	MWA	6.5	10.5	106.8	.125	Cfs	Ba	P	CS
8-MS2, MS3	10B-500	VD	AL-A-42	14	31	.035	1L,8R,4R,3L,6R,5L,7L,2R	SP,Dis	N													
8-MS3 Adventurer	10B-700	VD	AL-A-32	14	31	.035	1L,8R,4R,3L,6R,5L,7L,2R	SP,Dis	N													
Dodge 6-MD1	2B-500	VD	AL-AR-51	14	31	.035	1,5,3,6,2,4	SP,Dis	A-B	D	Co	1280[2]	1	MWA	6.0	9.3	77.8	.114[3]	Cfs	Ba	P	CS
6-MD2	10B-500	VD	AL-AR-42	14	31	.035	1L,8R,4R,3L,6R,5L,7L,2R	SP,Dis	BB	D	Co	1920	1	MWA	6.8	10.0	85.5	.125	Cfs	Ba	P	CS
8-MD3-L	10B-500	VD	AL-AR-42	14	31	.035	1L,8R,4R,3L,6R,5L,7L,2R	SP,Dis	BB	D	Co	2104	1	MWA	6.5	11.0	123.7	.125	Cfs	Ba	P	CS
8-MD3-H, MD3-M	10B-500	VD	AL-AR-42	14	31	.035	1L,8R,4R,3L,6R,5L,7L,2R	SP,Dis	N													
Imperial 8-MY1	10B-500	VD	AL-A-42	14	31	.035	1L,8R,4R,3L,6R,5L,7L,2R	SP,Dis	N													
Plymouth 6-MP1	2½B-500	VD	AL-AR-51	14	31	.035	1,5,3,6,2,4	SP,Dis	A-B	D	Co	1280[2]	1	MWA	6.0	9.3	77.8	.114[3]	Cfs	Ba	P	CS
8-MP2	10B-500	VD	AL-AR-42	14	31	.035	1L,8R,4R,3L,6R,5L,7L,2R	SP,Dis	BB	D	Co	1920	1	MWA	6.8	10.0	85.5	.125	Cfs	Ba	P	CS
FORD MOTOR CO.																						
Edsel 6-Ranger	4B-550	VD	Ch-870	18	29	.034	1,5,3,6,2,4	Gen,VR,FW,HT	Lo	.....	Co	1230	1	WA	6.0	9.5	85.2	.125	Spr	Ba	P	SS
8-Ranger	3B-550	VD	Ch-F-14-Y	18	25	.034	1R,5L,4R,8L,6L,3R,7L,2R	Gen,VR,FW,HT	Lo	.....	Co	1278	1	WA	6.8	10.0	85.5	.125	Spr	Ba	P	SS
8-Corsair	3B-550	VD	Ch-F-11-Y	18	25	.034	1R,5L,4R,8L,6L,3R,7L,2R	Gen,VR,FW,HT	Lo	.....	Co	1575	1	WA	7.0	11.0	113.1	.125	Spr	Ba	P	SS
Ford 6-Custom 300, Fairlane, Fairlane 500	4B-550	VD	Ch-870	18	25	.034	1,5,3,6,2,4	Gen,VR,FW,HT	Lo	.....	Co	1230	1	WA	6.0	9.5	85.2	.125	Spr	Ba	P	SS
8-Custom 300, Fairlane, Fairlane 500	3B-550	VD	Ch-F-14-Y	18	20	.034	1R,5L,4R,8L,6L,3R,7L,2R	Gen,VR,FW,HT	Lo	.....	Co	1278	1	WA	6.8	10.0	85.5	.125	Spr	Ba	P	SS
8-Thunderbird	4B-...	VD	Ch-F-11-Y	18	20	.034	1R,5L,4R,2R,6L,3R,7L,8L	Gen,VR,H,HT	Lo	D	Co	1575	1	WA	7.0	11.0	113.1	.125	TD	Ba	P	SS
Lincoln 8-Lincoln, Premiere, Continental	6B-450	VD	Ch-F-11-Y	18	25	.032	1R,5L,4R,2R,6L,3R,7L,8L	Gen,VR,FW,HT	N													
Mercury 8-Monterey	3B-450	VD	Ch-F-14-Y	18	25	.032	1R,5L,4R,8L,6L,3R,7L,2R	Gen,VR,FW,HT	BB	D	Co	1802	1	WA	6.5	10.5	106.8	.125	BD	Ba	P	Spr
8-Montclair, Park Lane	6B-450	VD	Ch-F-11-Y	18	25	.032	1R,5L,4R,2R,6L,3R,7L,8L	Gen,VR,FW,HT	N													
GENERAL MOTORS CORP.																						
Buick 8-4400	5B-400	HB	AC-44-S	14	25	.033	1R,2L,7R,8L,4L,5R,6L,3R	HT,Co,Gen,VR	Lo	D	Co	1845	1	Wo	7.0	11.0	113.0	.125	Spr	Ba	P	Spr
8-4600, 4700, 4800	12B-485	HB	AC-44-S	14	25	.033	1R,2L,7R,8L,4L,5R,6L,3R	HT,Co,Gen,VR	N													
Cadillac 8-60, 62, 75	5B-450[4]	CB	AC-44	14	23	.035	1L,8R,4R,3L,6R,5L,7L,2R	HT,Gen,Co,VR	N													
Chevrolet 6-1100, 1500, 1700	5B-475	Fly	AC-44	14	25	.036	1,5,3,6,2,4	HT	Chev	.....	Dia	1413	1	M-W	6.0	9.5	85.2	.125	Spr	Ba	P	Spr
8-1200, 1600, 1800	4B-...	VD	AC-44	14	25	.035	1L,8R,4R,3L,6R,5L,7L,2R	HT			Dia	1550	1	WA	6.0	10.0	100.5	.135	Spr	Ba	P	Spr
8-867	4B-600	VD	AC-46	14	25	.036	1L,8R,4R,3L,6R,5L,7L,2R	HT	BB	D	Co	1620	1	WA	6.5	10.0	90.7	.135	Spr	Ba	P	Spr
Oldsmobile 8-88	5B-850	VD	AC-44	14	26	.030	1L,8R,7L,3L,6R,5L,4R,2R	HT	Lo	.....	Co	1954	1	WA	7.0	11.0	113.0	.385	TP	Ba	LF	Co
8-Super 88	5B-850	VD	AC-44	14	26	.030	1L,8R,7L,3L,6R,5L,4R,2R	HT	Lo	.....	Co	2062	1	WA	7.0	11.0	113.0	.385	TP	Ba	LF	Co
8-98	5B-850	VD	AC-44	14	26	.030	1L,8R,7L,3L,6R,5L,4R,2R	HT	N													
Pontiac 8-5921, 5924, 5927, 5928	6B-460	CP	AC-45	14	20	.036	1L,8R,4R,3L,6R,5L,7L,2R	HT,FW,Gen,VR	BB	D	Co	2095	1	MWA	7.0	11.0	99.6	.125	Spr	Ba	P	CS
STUDEBAKER-PACKARD CORP.																						
Studebaker 6-59S	2B-550	VD	Ch-J-7	14	28	.031	1,5,3,6,2,4	DC,Co,Gen,VR,H	BB	D	Co	1100	1	MA	5.4	8.0	55.2	.125	PS	Ba	P	CSW
8-59V	4B-550	VD	Ch-H-18-Y	14	28	.036	1L,8R,4R,3L,6R,5L,7L,2R	Ro,Co,Gen,VR,H	BB	D	Co	1594	1	MA	6.5	10.0	90.6	.125	PS	Ba	P	CSW

ABBREVIATIONS

1—Or Champion H-10.
2—Auburn only; Borg and Beck, 1206.
3—Auburn only; Borg and Beck, .125.
4—El Dorado models, 7½ B-450.
A-B—Auburn or Borg and Beck.
AC—AC Spark Plug Div.
AL—Auto-Lite.
B—Before top center.
Ba—Ball.
BB—Borg and Beck.
BD—Borglite disc.
CB—Crankshaft balancer.
Cfs—Crimped flat springs.
Ch—Champion.
Chev—Chevrolet.
Co—Coil.
CP—Crankshaft pulley hub.
CS—Coil springs.
CSW—Coil springs and friction washers.
D—Dry.
DC—Distributor cap.
Dia—Diaphragm.
Dis—Distributor.
Fly—Flywheel.
FW—Front wheels.
Gen—Generator.
H—Hood.
HB—Harmonic balancer.
HT—High tension leads.
L—Left.
LF—Lubrication fitting.
Lo—Long.
MA—Molded asbestos.
M-W—Molded or woven.
MWA—Molded woven asbestos.
N—None.
P—Pre-lubricated.
PS—Plate springs.
R—Right.
Ro—Rotor.
SP—Spark plugs.
Spr—Spring.
SS—Steel springs.
SSS—Springs, steel on steel.
TC—Top center.
TD—Torbend disc.
TP—Torbend plate.
VD—Vibration dampener.
VR—Voltage regulator.
WA—Woven asbestos.
Wo—Woven.

For Directory of Car Manufacturers listed above, see Table of Contents

LAMP BULBS, FUSES AND CIRCUIT BREAKERS

LAMP BULBS (Trade Number)

PASSENGER CAR MAKE AND MODEL 12	Headlamp: High Beam	Headlamp: Low and High Beam	Headlamp: Arrangement	Headlamp Beam Indicator	Parking Light	Tail Light	Stop Light	Direction Signal: Front	Direction Signal: Rear	Direction Signal: Indicator	License Plate Light	Instrument Light	Ignition Lock Light	Back-Up Light	Dome Light	Clock Light
AMERICAN MOTORS CORP.																
Rambler 6-5900	N	5400	S	57	1034	1034	(1)	(2)	(1)	57	67	57	N	1073	1003	57
6-5910, 8-5920, 5980	4001[5]	4002[5]	Hor	57	1034	1034	(1)	(2)	(1)	57	67	57	N	1073	1003	57
CHRYSLER CORP.																
Chrysler 8-MC1, MC2, MC3	4001	4002	Hor	57	1034	1034	(1)	(2)	(1)	57	67	57	N	1073	1004	1816
De Soto 8-MS1, MS2, MS3	4001	4002	Hor	57	1034	67	1034	(2)	(4)	57	67	57	N	1073	1004	1816
Dodge 6-MD1, 8-MD2, MD3	4001	4002	Hor	57	1034	1034	(1)	(1)	(1)	57	67	57	N	1073	1004	N
Imperial 8-MY1	4001	4002	Hor	57	1034	1034	(1)	(2)	(1)	57	67	57	N	1073	1004	N
Plymouth 6-MP1, 8-MP2	4001	4002	Hor	57	1034	67	1034	(2)	1034	57	67	57	N	1073	1004	1816
FORD MOTOR CO.																
Edsel 6-Ranger, 8-Ranger, Corsair	4001	4002	Hor	1445	1034	1034[6]	(7)	(2)	(7)	57	67	57[8]	1445	1141	1003	57
Ford 6, 8-Custom 300 Fairlane, Fairlane 500	4001	4002	Hor	1445	1034	1034	(1)	(2)	(1)	57	67	57[8]	N	1141	1003	57
8-Thunderbird	4001	4002	Hor	57	1034	1034	1034	1034	1034	57	67	57	57	1141	1003	1816
Lincoln 8-Lincoln, Premiere	4001	4002	Can	1445	1034	1034	(1)	(2)	(1)	1445	67	57	57	1141	1003	(13)
8-Continental	4001	4002	Can	1445	1034	1034	(1)	(2)	(1)	1445	67	57	57	1141	1141[12]	(13)
Mercury 8-Monterey, Montclair, Park Lane	4001	4002	Hor	57	1034	1034	1034	1034	1034	1445	67	57	N	1073	1003	57
GENERAL MOTORS CORP.																
Buick 8-4400	4001	4002	Can	53	1034	1034	(1)	(2)	(1)	53	67	57	N	1073	1004	57
8-4600, 4700, 4800	4001	4002	Can	53	1034	1034	(1)	(2)	(1)	53	67	57	N	1073	90	57
Cadillac 8-60	4001	4002	Hor	57	67	1034	(1)	1034	(1)	53	67	57	53	1073	90	57
8-62, 75	4001	4002	Hor	57	67	1034	(1)	1034	(1)	53	67	57	53	1073	1004	57
Chevrolet 6, 8-1100, 1200, 1400, 1500, 1600, 1700	4001	4002	Hor	53	1034	1034	(1)	(2)	(1)	57	67	57	53	1073	1004	57
8-867	4001	4002	Hor	53	1034	1034	(1)	(2)	(1)	57	67	57	N	N	N	67
Oldsmobile 8-88, Super 88	4001	4002	Hor	53	1034	1034	1034	1034	1034	57	67	57	53	1073	1004	57
8-98	4001	4002	Hor	53	1034	1034	1034	1034	1034	57	67	57	53	1073	90	57
Pontiac 8-5921	4001	4002	Hor	57	1034	1034	(1)	(2)	(4)	57	67	57	53	1073	1004	(13)
8-5924, 5927, 5928	4001	4002	Hor	57	1034	1034[12]	(1)	(2)	(4)	57	67	57	53	1073	90	(13)
STUDEBAKER-PACKARD CORP.																
Studebaker 6-59S, 8-59V	N	5400	S	1445	1034	1034	(1)	(2)	(1)	1445	67	1445[15]	1445	1141	1004	1445[15]

FUSES AND CIRCUIT BREAKERS (Trade Number)

PASSENGER CAR MAKE AND MODEL 12	Headlamp	Headlamp Beam Indicator	Parking Light	Tail Light	Stop Light	Direction Indicator	License Plate Light	Instrument Light	Ignition Light	Back-Up Light	Dome Light	Clock	Clock Light
AMERICAN MOTORS CORP.													
Rambler 6-5900	18CB	(3)	12CB	(2)	30CB	(4)	(2)	(2)	N	(4)	(2)	N	(2)
6-5910, 8-5920, 5980	18CB	(3)	12CB	(2)	30CB	(4)	(2)	(2)	N	(4)	(2)	N	(2)
CHRYSLER CORP.													
Chrysler 8-MC1, MC2, MC3	22½CB	(3)	(3)	15CB	(1)	N	(1)	(1)	N	SFE6	SFE6	SFE1	(1)
De Soto 8-MS1, MS2, MS3	22½CB	(3)	(3)	15CB	(1)	N	(1)	(1)	N	6CB	(1)	SFE2	(1)
Dodge 6-MD1, 8-MD2, MD3	22½CB	(3)	(3)	15CB	(1)	N	(1)	(1)	N	N	(1)	SFE1	(1)
Imperial 8-MY1	22½CB	(3)	(3)	15CB	(1)	N	(1)	(1)	(1)	SFE6	SFE6	SFE1	(1)
Plymouth 6-MP1, 8-MP2	22½CB	(3)	(3)	15CB	(1)	N	(1)	(1)	N	N	(1)	SFE1	N
FORD MOTOR CO.													
Edsel 6-Ranger, 8-Ranger, Corsair	18CB[9]	(10)	12CB	(2)	(2)	SFE7½	(2)	(2)	(2)	(2)	(11)	1AG1	(2)
Ford 6, 8-Custom 300 Fairlane, Fairlane 500	18CB[9]	(10)	12CB	(2)	(2)	SFE7½	(2)	(2)	N	(2)	(11)	1AG1	(2)
8-Thunderbird	18CB[9]	(10)	12CB	(2)	(2)	SFE7½	(2)	(2)	(2)	(2)	SFE7½	SFE1	(2)
Lincoln 8-Lincoln, Premiere	18CB[9]	(10)	12CB	(2)	(2)	SFE5	(2)	(2)	(2)	SFE7½	SFE14	1AG1	(2)
8-Continental	18CB[9]	(10)	12CB	(2)	(2)	SFE5	(2)	(2)	(2)	SFE7½	SFE14	1AG1	(2)
Mercury 8-Monterey, Montclair, Park Lane	18CB	......	12CB	(2)	(2)	SFE7½	(2)	(2)	N	SFE7½	SFE7½	1AG2	......
GENERAL MOTORS CORP.													
Buick 8-4400	15CB	(3)	(3)	10AGC	10AGC	(4)	(1)	5AGC	N	10AGC	SFE20	2AGA	(13)
8-4600, 4700, 4800	15CB	(3)	(3)	10AGC	10AGC	(4)	(1)	5AGC	N	10AGC	SFE20	2AGA	(13)
Cadillac 8-60	CB	(3)	(3)	......	......	......	(3)	(3)	(3)	......	......	......	......
8-62, 75	CB	(3)	(3)	......	......	......	(3)	(3)	(3)	......	......	......	......
Chevrolet 6, 8-1100, 1200, 1400, 1500, 1600, 1700	15CB	(3)	(3)	AGC15	(1)	......	(1)	AGC3	(13)	AGC10	(1)	(14)	(13)
8-867	15CB	(3)	(3)	AGC10	(1)	......	(1)	AGC3	N	N	N	AGC10	(13)
Oldsmobile 8-88, Super 88	25CB	(3)	(3)	SFE9	SFE20	SFE9	(1)	AGA3	(13)	(1)	(4)	AGA1	(13)
8-98	25CB	(3)	(3)	SFE9	AGC25	SFE9	(1)	AGA3	(13)	(1)	(4)	AGA1	(13)
Pontiac 8-5921	22CB	(3)	(3)	......	......	......	......	......	......	......	......	......	......
8-5924, 5927, 5928	22CB	(3)	(3)	......	......	......	......	......	......	......	......	......	......
STUDEBAKER-PACKARD CORP.													
Studebaker 6-59S, 8-59V	20CB	(3)	(3)	(3)	AGC15	(4)	(3)	(3)	(3)	(3)	(4)	1AG3	(3)

ABBREVIATIONS

1—Combined with tail light.
2—Combined with parking light.
3—Combined with headlamp.
4—Combined with stop light.
5—Single 5400 used on some Deluxe models.
6—Outer only; inner, 67.
7—Outer tail light.
8—Also 1445.
9—High beam only; low beam, 12CB.
10—Combined with high beam of head lamp.
11—Combined with direction indicator.
12—Also 67.
13—Combined with instrument lights.
14—Combined with back-up light.
15—Lark only; Hawk models, 57.
CB—Circuit breaker.
Can—Canted diagonally.
Hor—Horizontal.
N—None.
S—Single.

For Directory of Car Manufacturers listed above, see Table of Contents

TRANSMISSIONS—Conventional and Conventional with Overdrive

PASSENGER CAR MAKE AND MODEL 13	TYPE: Manual	TYPE: Manual with O.D.	TYPE: Automatic	CONVENTIONAL TRANSMISSION: No. of Forward Speeds	Ratios: First	Ratios: Second	Ratios: Third	Ratios: Reverse	Synchronous Meshing Specify Gears	Lubricant: Capacity (pt.)	Lubricant: Type Recommended	SAE Viscosity Number: Summer	SAE Viscosity Number: Winter	SAE Viscosity Number: Extreme Cold	OVERDRIVE: Type	Manual Lockout	Downshift Accelerator Control	Minimum Cut-in Speed (mph)	Gear Ratio (to—1)	Lubricant: Capacity (pt.)	Lubricant: Separate Filler	Lubricant: Type Recommended	SAE Viscosity Number: Summer	SAE Viscosity Number: Winter	SAE Viscosity Number: Extreme Cold
AMERICAN MOTORS CORP.																									
Rambler 6-5900, 5910	Std	Opt	Opt	3	2.61	1.63	1.00	3.54	ST	1½	MG	90	80	80	P	Y	Y	25	.700	1¼	Y	MG	90	80	80
8-5920	Std	Opt	Opt	3	2.57	1.55	1.00	3.49	ST	2¼	MG	90	80	80	P	Y	Y	25	.700	1¼	Y	MG	90	80	80
8-5980	Std	Opt	Opt	3	2.49	1.59	1.00	3.15	ST	4	MG	90	80	80	P	Y	Y	25	.722		Y	MG	90	80	80
CHRYSLER CORP.																									
Chrysler 8-MC1	Std	NA	Opt	3	2.12	1.43	1.00	2.73	ST	2¾	MP	80	80	75	N										
8-MC2, MC3	NA	NA	Std	N											N										
De Soto 8-MS1	Std	NA	Opt	3	2.12	1.43	1.00	2.73	ST	2¾	MP	80	80	75	N										
8-MS2, MS3	NA	NA	Std	N											N										
Dodge 6-MD1	Std	NA	Opt	3	2.50	1.68	1.00	3.20	ST	2¾	MP	80	80	75	N										
8-MD2, MD3-L	Std	NA	Opt	3	2.12	1.43	1.00	2.73	ST	2¾	MP	80	80	75	N										
8-MD3-M, MD3-H	NA	NA	Std	N											N										
Imperial 8-MY1	NA	NA	Std	N											N										
Plymouth 6-MP1	Std	Opt	Opt	3	2.50	1.68	1.00	3.20	ST	2¾	MP	80	80	75	P	N	Y	24	.700	¾	Y	MP	80	80	75
8-MP2	Std	Opt	Opt	3	2.12	1.43	1.00	2.73	ST	2¾	MP	80	80	75	P	N	Y	25	.700	¾	Y	MP	80	80	75
FORD MOTOR CO.																									
Edsel 6, 8-Ranger	Std	NA	Opt	3	2.40	1.49	1.00	2.86	ST	3¼	ME	80	80	80	N										
8-Corsair	Std	NA	Opt	3	2.32	1.48	1.00	2.82	ST	3¼	ME	80	80	80	N										
Ford 6-Custom 300, Fairlane, Fairlane 500	Std	Opt	Opt	3	3.09	1.92	1.00	3.67	ST	3	ME	80	80	80	P	Y	Y	28	.700	1¼	N	ME	80	80	80
8-Custom 300, Fairlane, Fairlane 500	Std	Opt	Opt	3	2.40	1.49	1.00	2.86	ST	3	ME	80	80	80	P	Y	Y	28	.700	1¼	N	ME	80	80	80
8-Thunderbird	Std	Opt	Opt	3	2.49	1.59	1.00	3.15	ST	3¾	ME	80	80	80	P	Y	Y	28	.722	¾	N	ME	80	80	80
Lincoln 8-Lincoln, Premiere, Continental	NA	NA	Std	N											N										
Mercury 8-Monterey	Std	NA	Opt	3	2.37	1.51	1.00	2.81	ST	3	ME	80	80	80	N										
8-Montclair, Park Lane	NA	NA	Std	N											N										
GENERAL MOTORS CORP.																									
Buick 8-4400	Std	NA	Opt	3	2.15	1.37	1.00	2.28	ST	2½	MP	90	90	90	N										
8-4600, 4700, 4800	NA	NA	Std	N											N										
Cadillac 8-60, 62, 75	NA	NA	Std	N											N										
Chevrolet 6-1100, 1500, 1700	Std	Opt	Opt	3	2.94	1.68	1.00	2.94	ST	2	MG	90	90	80	P	Y	Y	27	.700	1	N	MG	90	90	80
8-1200, 1600, 1800	Std	Opt	Opt	3	2.47	1.53	1.00	2.80	ST	2	MG	90	90	80	P	Y	Y	27	.700	1	N	MG	90	90	80
8-867	Std	NA	Opt	3	2.21	1.32	1.00	2.51	ST	2	MG	90	90	80	N										
Oldsmobile 8-88, Super 88	Std	NA	Opt	3	2.15	1.37	1.00	2.28	ST	2½	MP	80	80	80	N										
8-98	NA	NA	Std	N											N										
Pontiac 8-5921, 5924, 5927, 5928	Std	NA	Opt	3	2.21	1.32	1.00	2.51	ST	2	EP	90	90	90	N										
STUDEBAKER-PACKARD CORP.																									
Studebaker 6-59S	Std	Opt	Opt	3	2.61	1.63	1.00	3.54	ST	2¼	MG	90	90	90	P	Y	Y	30	.700	¾	Y	MG	90	90	90
8-59V	Std	Opt	Opt	3	2.57	1.55	1.00	3.49	ST	3¼	MG	90	90	90	P	Y	Y	29	.700	¼	Y	MG	90	90	90

ABBREVIATIONS

EP—Extreme pressure gear oil.
ME—Mild extreme pressure gear oil.
MG—Mineral gear oil.
MP—Multi-purpose gear oil.
N—No or none.
NA—Not available.
Opt—Optional.
P—Planetary.
ST—Second and third.
Std—Standard.
Y—Yes.

For Directory of Car Manufacturers listed above, see Table of Contents

AUTOMATIC TRANSMISSIONS

PASSENGER CARS MAKE AND MODEL 14	TRADE NAME	Type	Method of Selection	SELECTOR PATTERN	GEAR RATIOS 1st Speed	2nd Speed	3rd Speed	4th Speed	Reverse	Max. Upshift Speeds—Drive Range (mph)	Max. Kickdown Speeds Drive Range (mph)	TORQUE CONVERTER Number of Elements	Max. Ratio at Stall at Engine RPM	Type of Cooling	LUBRICATION Capacity—Refill (pt.)	Type Recommended
AMERICAN MOTORS CORP.																
Rambler 6-5900	Flash-O-Matic	TCG	Lev	P,N,2[1],1[2],L,R	2.40	1.47	1.00		2.00	53	69	3	2.12-1430	AC	20	A
6-5910	Flash-O-Matic	TCG	PB	R,NS,D2[1],D1[2],L,P	2.40	1.47	1.00		2.00	53	69	3	2.12-1430	AC	20	A
8-5920	Flash-O-Matic	TCG	PB	R,NS,D2[1],D1[2],L,P	2.40	1.47	1.00		2.00	51	66	3	2.12-1700	WC	20	A
8-5980	Flash-O-Matic	TCG	PB	R,NS,D2[1],D1[2],L,P	2.40	1.47	1.00		2.00	50	68	3	2.12-1680	WC	22	A
CHRYSLER CORP.																
Chrysler 8-MC1	Torque Flite	TCG	PB	R,1[3],N,2[4],D[2]	2.45	1.45	1.00		2.20	75	30	3	2.20-1875	WC	21	A
8-MC2	Torque Flite	TCG	PB	R,1[3],N,2[4],D[2]	2.45	1.45	1.00		2.20	75	30	3	2.20-1880	WC	21	A
8-MC3	Torque Flite	TCG	PB	R,1[3],N,2[4],D[2]	2.45	1.45	1.00		2.20	80	35	3	2.20-2000	WC	21	A
8-MC3, 300-E	Torque Flite	TCG	PB	R,1[3],N,2[4],D[2]	2.45	1.45	1.00		2.20	80	35	3	2.20-	WC	21	A
De Soto 8-MS1	Power Flite	TCG	PB	R,N,L,D[4]	1.72	1.00			2.39	60	60	3	2.20-1810	WC	20	A
8-MS1	Torque Flite	TCG	PB	R,1[3],N,2[4],D[2]	2.45	1.45	1.00		2.20	70	60	3	2.20-1810	WC	21	A
8-MS2	Torque Flite	TCG	PB	R,1[3],N,2[4],D[2]	2.45	1.45	1.00		2.20	70	60	3	2.20-1900	WC	21	A
8-MS3	Torque Flite	TCG	PB	R,1[3],N,2[4],D[2]	2.45	1.45	1.00		2.20	70	60	3	2.20-1910	WC	21	A
8-MS3 Adventurer	Torque Flite	TCG	PB	R,1[3],N,2[4],D[2]	2.45	1.45	1.00		2.20	80	75	3	2.20-1910	WC	21	A
Dodge 6-MD1	Power Flite	TCG	PB	R,N,L,D[4]	1.72	1.00			2.39	42	37	3	2.60-1330	WC	20	A
8-MD2	Power Flite	TCG	PB	R,N,L,D[4]	1.72	1.00			2.39	55	50	3	2.20-1875	WC	20	A
8-MD3-M	Power Flite	TCG	PB	R,N,L,D[4]	1.72	1.00			2.39	55	50	3	2.20-1810	WC	20	A
8-MD2	Torque Flite	TCG	PB	R,1[3],N,2[4],D[2]	2.45	1.45	1.00		2.20	75	30	3	2.20-1840	WC	18	A
8-MD3	Torque Flite	TCG	PB	R,1[3],N,2[4],D[2]	2.45	1.45	1.00		2.20	75	30	3	2.20-1840	WC	21	A
Imperial 8-MY1	Torque Flite	TCG	PB	R,N,D[2],2[4],1[3]	2.45	1.45	1.00		2.20	80	70	3	2.20-2000	WC	21	A
Plymouth 6-MP1	Power Flite	TCG	PB	R,N,D[4],L	1.72	1.00			2.39	42	37	3	2.60-1330	WC	20	A
8-MP1	Power Flite	TCG	PB	R,N,D[4],L	1.72	1.00			2.39	55	50	3	2.20-1920	WC	20	A
8-MP2-L, MP2-M, MP2-H	Torque Flite	TCG	PB	R,N,D[2],2[4],1[3]	2.45	1.45	1.00		2.20	75	30	3	2.20-1920	WC	18	A
8-MP2-P	Torque Flite	TCG	PB	R,N,D[2],2[4],1[3]	2.45	1.45	1.00		2.20	75	30	3	2.20-1910	WC	18	A
FORD MOTOR CO.																
Edsel 8-Ranger	Two Speed	TCG	Lev	P,R,N,D[4],L	1.75	1.00			1.50	56	51	3	2.60-1720	WC	22	A
8-Corsair	Two Speed	TCG	Lev	P,R,N,D[4],L	1.75	1.00			1.50	60	55	3	2.50-1450	WC	22	A
Ford 6-Custom 300, Fairlane, Fairlane 500	Fordomatic	TCG	Lev	P,R,N,D[4],L	1.75	1.00			1.50	47	43	3	2.60-1490	WC	20	A
8-Custom 300, Fairlane, Fairlane 500	Fordomatic	TCG	Lev	P,R,N,Dr[4],Lo	1.75	1.00			1.50	56	51	3	2.60-1720	WC	20	A
8-Thunderbird	Cruise-O-Matic	TCG	Lev	P,R,N,D2[1],D1[2],L	2.40	1.47	1.00		2.00	75	65	3	1.90-1590	WC	20	A
Lincoln 8-Lincoln, Premiere, Continental	Turbo Drive	TCG	Lev	P,R,N,D2[1],D1[2],L	2.37	1.48	1.00		1.84	69	64	3	2.10-1720	WC	21	A
Mercury 8-Monterey	Merc-O-Matic	TCG	Lev	P,R,N,D[2],L	2.40	1.47	1.00		2.00	61	58	3	2.10-1530	WC	20	A
8-Montclair	Merc-O-Matic	TCG	Lev	P,R,N,D[2],L	2.40	1.47	1.00		2.00	72	68	3	2.03-1710	WC	22	A
8-Park Lane	Multi-Drive	TCG	Lev	P,R,N,D2[1],D1[2],L	2.37	1.48	1.00		1.84	72	66	3	2.10-1815	WC	23½	A
GENERAL MOTORS CORP.																
Buick 8-4400, 4600, 4700, 4800	Twin Turbine	TCG	Lev	P,N,D,L,R	1.82	1.00			1.82	No	No	5	3.10-1900	WC	24	A
8-4400, 4600, 4700, 4800	Triple Turbine	TCG	Lev	P,R,N,D,G	1.82	1.00			1.82	No	No	5	3.10-2100	WC	24	A
Cadillac 8-60, 62, 75	Hydra-Matic	FCG	Lev	P,N,Dr1[5],Dr2[2],Lo[4],R	3.97	2.55	1.55	1.00	3.74	79	71	No		WC	23	A
Chevrolet 6-1100, 1500, 1700	Powerglide	TCG	Lev	P,R,N,D[4],L	1.82	1.00			1.82	53	40	3	2.10-	WC	9	A
8-1200, 1600, 1800	Powerglide	TCG	Lev	P,R,N,D[4],L	1.82	1.00			1.82	55	50	3	2.10-	WC	9	A
8-1200, 1600, 1800	Turboglide	TCG	Lev	P,R,N,D[4],Gr	2.67	1.63			2.67	60	60	5	3.80-	WC	4	A
8-867	Powerglide	TCG	Lev	P,R,N,D[4],L	1.82	1.00			1.82	55	50	3	2.10-	AC	9	A
Oldsmobile 8-88, Super 88, 98	Hydra-Matic	FCG	Lev	P,N,D[5],S[2],L[4],R	3.97	2.55	1.55	1.00	3.74	73	68	No		WC	22	A
Pontiac 8-5921, 5924, 5927, 5928	Hydra-Matic	FCG	Lev	P,N,DR1[5],DR2[2],Lo[4],R	3.97	2.55	1.55	1.00	3.74	75	70	No		WC	18	A
STUDEBAKER-PACKARD CORP.																
Studebaker 6-59S	Flightomatic	TCG	Lev	P,N,D[4],L,R	2.40	1.47	1.00		2.00	60	55	3	2.15-1400	AC	18	A
8-59V	Flightomatic	TCG	Lev	P,N,D[1],L,R	2.40	1.47	1.00		2.00	68	65	3	2.15-1600	AC	18	A

ABBREVIATIONS

1—Transmission goes through second and third speeds.
2—Transmission goes through first, second and third speeds.
3—Low speed only.
4—Transmission goes through first and second speeds.
5—Transmission goes through first, second, third and fourth speeds.

A—Automatic transmission fluid, type "A."
AC—Air cooled.
D or **Dr** or **DR**—Drive range.
FCG—Fluid coupling with gears.
G or **Gr**—Grade retarder.
L or **Lo** or **LO**—Low range.
Lev—Lever.
N—Neutral.
No—None.
NS—Neutral and or start.
P—Parking.
PB—Push button.
R—Reverse gear.
S—Super.
TCG—Torque converter with planetary gears.
WC—Water cooled.

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PROPELLER SHAFT, AND REAR AXLE

Passenger Car Make and Model (15)	Propeller Shaft: Number Used	Propeller Shaft: Type	Intermediate Bearing: Type	Intermediate Bearing: Lubrication	Universals: Make	Universals: Number Used	Universals: Type	Universals Bearing: Type	Universals Bearing: Lubrication	Drive and Torque Taken Through	Rear Axle: Type	Gear Type	Drive Pinion Offset	Number of Differential Pinions	Gearing, Standard Ratios: Automatic (to —1)	Standard Ratios: Overdrive (to —1)	Standard Ratios: Manual (to —1)	No. of Teeth—Ring and Pinion: Automatic	No. of Teeth: Overdrive	No. of Teeth: Manual (to —1)	Ring Gear: Pitch Diameter (In.)	Ring Gear: Outside Diameter (In.)	Pinion Adjustment	Pinion Bearing Adjustment	Wheel Bearing Type	Lubricant Capacity (Pt.)
AMERICAN MOTORS CORP.																										
Rambler 6-5900	1	Ex	N	......	M-U	2	Cr	AF	P	RS	SF	Hy	1.50	1	3.31	3.78	3.31	13-43	9-34	13-43	7.50	7.54	Sh	Sh	C-R	3
6-5910	1	TT	AF	P	M-U	1	Cr	AF	P	TT	SF	Hy	1.50	1	3.31	4.11	3.78	13-43	9-37	9-34	7.50	7.54	Sh	Sh	C-R	3
8-5920	1	TT	AF	P	M-U	1	Cr	AF	P	TT	SF	Hy	1.50	1	3.15	4.10	4.10	13-41	10-41	10-41	8.75	8.81	Sh	Sh	C-R	4
8-5980	1	TT	AF	P	M-U	1	Cr	AF	P	TT	SF	Hy	1.50	1	3.15	3.54	3.54	13-41	11-39	11-39	8.75	8.81	Sh	Sh	C-R	4
CHRYSLER CORP.																										
Chrysler 8-MC1	1	Ex	N	......	Own	2	BT[1]	AF	P	RS	SF	Hy	1.50	2	2.93	N	3.54	14-41	N	......	8.75	8.75	SS	Sh	TR	3½
8-MC2, MC3	1	Ex	N	......	Own	2	BT[1]	AF	P	RS	SF	Hy	1.50	2	2.93	N	N	14-41	N	N	8.75	8.75	SS	Sh	TR	3½
8-MC3, 300-E	1	Ex	N	......	Own	2	BT[1]	AF	P	RS	SF	Hy	1.50	2	3.31	N	N	13-43	N	N	8.75	8.75	SS	Sh	TR	3½
De Soto 8-MS1	1	Ex	N	......	Own	2	BT[1]	AF	P	RS	SF	Hy	1.50	2	3.31	N	3.54	13-43	N	11-39	8.75	8.75	SS	Sh	TR	3½
8-MS2, MS3	1	Ex	N	......	Own	2	BT[1]	AF	P	RS	SF	Hy	1.50	2	3.31	N	N	13-43	N	N	8.75	8.75	SS	Sh	TR	3½
Dodge 6-MD1	1	Ex	N	......	Own	2	BT[1]	AF	P	RS	SF	Hy	1.50	2	3.73	N	3.73	11-41	N	11-41	8.25	8.25	SS	Sh	TR	3¼
8-MD2, MD3-L	1	Ex	N	......	Own	2	BT[1]	AF	P	RS	SF	Hy	1.50	2	3.31[2]	N	3.54	13-43[2]	N	11-39	8.75	8.75	SS	Sh	TR	3½
8-MD3-M	1	Ex	N	......	Own	2	BT[1]	AF	P	RS	SF	Hy	1.50	2	3.31[2]	N	N	13-43[2]	N	N	8.75	8.75	SS	Sh	TR	3½
8-MD3-H	1	Ex	N	......	Own	2	BT[1]	AF	P	RS	SF	Hy	1.50	2	2.93	N	N	14-41	N	N	8.75	8.75	SS	Sh	TR	3½
Imperial 8-MY1	2	Ex	AF	P	Own	3	Cr	AF	P	RS	SF	Hy	1.50	2	2.93	N	N	14-41	N	N	8.75	8.75	SS	Sh	TR	3½
Plymouth 6-MP1	1	Ex	N	......	Own	2	BT[1]	AF	P	RS	SF	Hy	1.50	2	3.73	4.10	3.73	11-41	10-41	11-41	8.25	8.25	SS	Sh	TR	3¼
8-MP2	1	Ex	N	......	Own	2	BT[1]	AF	P	RS	SF	Hy	1.50	2	3.31[2]	3.91	3.54	13-43[2]	11-43	11-39	8.75	8.75	SS	Sh	TR	3½
FORD MOTOR CO.																										
Edsel 6, 8-Ranger	1	Ex	N	......	Spi	2	Cr	AF	P	RS	SF	Hy	2.25	2	3.10	N	3.56	......	N	......	8.75	8.75	Sh	Sh	Ba	......
8-Corsair	1	Ex	N	......	Spi	2	Cr	AF	P	RS	SF	Hy	2.25	2	2.91	N	3.56	......	N	......	8.75	8.75	Sh	Sh	Ba	......
Ford 6-Custom 300, Fairlane, Fairlane 500	1	Ex	N	......	S-M	2	Cr	AF	P	RS	SF	Hy	2.25	2	3.56	3.70	3.56	......	......	......	8.75	8.75	Sh	Sh	Ba	4½
8-Custom 300, Fairlane, Fairlane 500	1	Ex	N	......	S-M	2	Cr	AF	P	RS	SF	Hy	2.25	2	3.10	3.70	3.56	......	......	......	8.75	8.75	Sh	Sh	Ba	4½
8-Thunderbird	1	Ex	N	......	Spi	2	Cr	NR	F	RS	SF	Hy	2.25	2	3.10	3.70	3.70	......	......	......	8.75	8.75	Sh	CF	Ba	4½
Lincoln 8-Lincoln, Premiere, Continental	1	Ex	N	......	Spi	2	Cr	NR	F	Tas	SF	Hy	2.38	2	2.89	N	N	19-55	N	N	9.38	9.38	Sh	Sh	Ba	4¾
Mercury 8-Monterey	1	Ex	N	......	Spi	2	Cr	NR	F	RS	SF	Hy	2.25	2	3.10	N	3.56	10-31	N	9-32	8.75	8.75	Sh	Sh	Ba	4½
8-Montclair	1	Ex	N	......	Spi	2	Cr	NR	F	RS	SF	Hy	2.25	2	2.71	N	N	17-46	N	N	8.75	8.75	Sh	Sh	Ba	4½
8-Park Lane	1	Ex	N	......	Spi	2	Cr	NR	F	RS	SF	Hy	2.25	2	2.71	N	N	17-46	N	N	9.00	9.00	Sh	Sh	Ba	4½
GENERAL MOTORS CORP.																										
Buick 8-4400	2	TT	Ba	P	Sag[3]	2	Cr	P1[4]	Tr[5]	TT	SF	Hy	1.75	2	3.07[6]	N	3.58	......	N	12-43	9.38	9.38	Sh	Sh	Ba	6½
8-4600, 4700, 4800	2	TT	Ba	P	Sag[3]	2	Cr	P1[4]	Tr[5]	TT	SF	Hy	1.75	2	3.23[6]	N	N	......	N	N	9.38	9.38	Sh	Sh	Ba	6½
Cadillac 8-60, 62	2	Ex	AF	P	M-S	3	CT	Ne	P	Li	SF	Hy	1.75	2	2.94[7]	N	N	16-47[7]	N	N	9.38	9.42	......	CS	Ba	5
8-75	2	Ex	AF	P	M-S	3	CT	Ne	P	Li	SF	Hy	1.75	2	3.36	N	N	14-47	N	N	9.38	9.42	......	CS	Ba	5
Chevrolet 6-1100, 1500, 1700	2	Ex	AF	P	Own	3	YS	AF	P	UL	SF	Hy	1.50	2	3.36	4.11	3.55	11-37	9-37	9-32	8.38	8.38	Sh	N	Ba	4
8-1200, 1600, 1800	2	Ex	AF	P	Own	3	YS	AF	P	UL	SF	Hy	1.50	2	3.36	3.70	3.55	11-37	10-37	9-32	8.38	8.38	Sh	N	Ba	4
8-867	1	Ex	N	......	Own	2	YS	AF	F	SR	SF	Hy	1.50	2	3.55	N	3.70	9-32	N	10-37	8.38	8.38	Sh	N	Ba	4
Oldsmobile 8-88	2	Ex	AF	P	S-S	3	Cr	AF	P	RS	SF	Hy	1.75	2	3.08	N	3.64	13-40	N	11-40	9.25	9.25	Sh	CS	Ba	5
8-Super 88	2	Ex	AF	P	S-S	3	Cr	AF	P	RS	SF	Hy	1.75	2	3.23	N	3.64	13-42	N	11-40	9.25	9.25	Sh	CS	Ba	5
8-98	2	Ex	AF	P	S-S	3	Cr	AF	P	RS	SF	Hy	1.75	2	3.42	N	N	12-41	N	N	9.25	9.25	Sh	CS	Ba	5
Pontiac 8-5921, 5924, 5927, 5928	2	Ex	Ba	P	Sag	3	Cr	AF	P	TA	SF	Hy	1.75	2	3.08	N	3.23	13-40	N	13-42	9.25	9.27	Sh	CS	Ba	5½
STUDEBAKER-PACKARD CORP.																										
Studebaker 6-59S	1	Ex	N	......	Spi	2	Cr	AF	P	RS	SF	Hy	......	2	3.54	3.73[8]	3.54[9]	......	......	......	7.75	7.79	Sh	Sh	TR	2½
8-59V	1	Ex	N	......	Spi	2	Cr	AF	P	RS	SF	Hy	......	2	3.31	3.54	3.31	......	......	......	7.50	7.54	Sh	Sh	TR	2½
6-59S Silver Hawk	1	Ex	N	......	Spi	2	Cr	AF	P	RS	SF	Hy	......	2	3.54	4.27	4.10	13-46	11-47	10-41	7.75	7.79	Sh	Sh	TR	2½
8-59V Silver Hawk	1	Ex	N	......	Spi	2	Cr	AF	P	RS	SF	Hy	......	2	3.31	3.73	3.54	13-43	11-41	13-46	7.75	7.80	Sh	Sh	TR	2½

ABBREVIATIONS

1—Front only; rear, cross.
2—Power Flite only; Torque Flite, 2.93 (14-41).
3—Front only; rear, Saginaw or Spicer.
4—Front only; rear, anti-friction.
5—Front only; rear, prepacked.
6—Twin turbine only; triple turbine, 2.78.
7—El Dorado models, 3.21 (14-45).
8—Deluxe models only; Regal Deluxe models, 4.10.
9—Deluxe models only; Regal Deluxe models, 3.73.

AF—Anti-friction.
Ba—Ball.
BT—Ball and trunion.
CF—Companion flange nut.
Cr—Cross.
C-R—Cone and roller.
CS—Collapsible spacer.
CT—Cross and trunion.
Ex—Exposed.
F—Fitting.
Hy—Hypoid.
Li—Links.
M-S—Mechanics or Saginaw.
M-U—Mechanics or Universal.
N—None.
Ne—Needle.
NR—Needle roller.
P—Prepacked.
RS—Rear springs.
Sag—Saginaw.
SF—Semi-floating.
Sh—Shims.
S-M—Spicer or Mechanics.
Spi—Spicer.
SR—Rear springs and radius rods.
SS—Solid shim (washer).
S-S—Saginaw and Spicer.
TA—Trailing arms.
Tas—Trailing arms and springs.
Tr—By transmission.
TR—Tapered roller.
TT—Torque tube.
UL—Upper and lower control arms.
YS—Yoke and spider (trunion).

For Directory of Car Manufacturers listed above, see Table of Contents

TIRES AND BRAKES

PASSENGER CAR MAKE AND MODEL 16	STANDARD TIRES: Rev. per Mile at 30 mph	STANDARD TIRES: Tire Size	SERVICE BRAKES: Type	Power Brake Type	Effective Area (sq. in.)	Percent Brake Effectiveness—Front	Drum: Type and Material	Drum Diameter: Front	Drum Diameter: Rear	Brake Lining: Bonded or Riveted	Front Shoe: Material	Front Shoe Size (length-width-thickness): Front Wheel	Front Shoe Size (length-width-thickness): Rear Wheel	Front Shoe: Segments per Shoe	Rear Shoe: Material	Rear Shoe Size (length-width-thickness): Front Wheel	Rear Shoe Size (length-width-thickness): Rear Wheel	Rear Shoe: Segments per Shoe	Wheel Cylinder Bore: Front	Wheel Cylinder Bore: Rear	Master Cylinder Bore	Available Pedal Travel	Line Pressure at 100 lb. Pedal Load	Shoe Clearance Adjustment	PARKING BRAKES: Type of Control	Location of Control	Operates on
AMERICAN MOTORS CORP.																											
Rambler 6-5900	790.0	5.90/15	Hyd	N	......	60.2	CIA	9	9	Riv	MA	7 5/8x2x7/32	7 5/8x2x7/32	1	MA	9 53/64x2x7/32	9 53/64x2x7/32	1	1	13/16	1	7 5/16	825	.015	PH	UL	RB
6-5910	765.0	6.40/15	Hyd	Vac	......	60.2	CIA	9	9	Riv	MA	7 15/16x2 1/4x7/32	7 5/8x2x7/32	1	MA	9 1/2x2 1/2x7/32	9 53/64x2x7/32	1	1	13/16	1	6 1/2	785	.015	FO	UL	RB
8-5920	778.0	7.50/14	Hyd	Vac	......	62.4	CIS	10	10	Riv	MA	8 29/32x2 1/2x7/32	8 15/32x1 3/4x7/32	1	MA	11 1/16x2 1/2x7/32	10 7/8x1 3/4x7/32	1	1 1/8	7/8	1	6 1/2	785	.015	FO	UL	RB
8-5980	765.0	8.00/14	Hyd	Vac	......	62.4	CIS	10	10	Riv	MA	8 29/32x2 1/2x7/32	8 15/32x1 3/4x7/32	1	MA	11 1/16x2 1/2x7/32	10 7/8x1 3/4x7/32	1	1 1/8	7/8	1	6 1/2	785	.015	FO	UL	RB
CHRYSLER CORP.																											
Chrysler 8-MC1	760.0	8.00/14	Hyd	Vac	230.0	60.0	Cen	11	11	Bon	MA	11 1/2x2 1/2x13/64	11 1/2x2 1/2x13/64	1	MA	11 1/2x2 1/2x13/64	11 1/2x2 1/2x13/64	1	1 1/8	1 1/8	1 1/8	6	650	NMA	TH	UL	TO
8-MC2	747.0	8.50/14	HV	Vac	251.0	60.0	Cen	12	12	Bon	MA	12 29/64x2 1/2x13/64	12 29/64x2 1/2x13/64	1	MA	12 29/64x2 1/2x13/64	12 29/64x2 1/2x13/64	1	1 1/8	1 1/8	1 1/8	4 5/8	1210	NMA	TH	UL	TO
8-MC3	732.0	9.00/14	HV	Vac	251.0	60.0	Cen	12	12	Bon	MA	12 29/64x2 1/2x13/64	12 29/64x2 1/2x13/64	1	MA	12 29/64x2 1/2x13/64	12 29/64x2 1/2x13/64	1	1 1/8	1 1/8	1 1/8	4 5/8	1210	NMA	TH	UL	TO
De Soto 8-MS1	760.0	8.00/14	Hyd	Vac	230.0	60.0	Cdb[1]	11	11	Bon	MA	11 1/2x2 1/2x13/64	11 1/2x2 1/2x13/64	1	MA	11 1/2x2 1/2x13/64	11 1/2x2 1/2x13/64	1	1 1/8	1 1/8	1 1/8	6	650	NMA	TH	UL	TO
8-MS2	747.0	8.50/14	Hyd	Vac	251.0	60.0	Cen	12	12	Bon	MA	12 29/64x2 1/2x13/64	12 29/64x2 1/2x13/64	1	MA	11 1/2x2 1/2x13/64	11 1/2x2 1/2x13/64	1	1 1/8	1 1/8	1 1/8	6	650	NMA	TH	UL	TO
8-MS3	747.0	8.50/14	HV	Vac	251.0	60.0	Cen	12	12	Bon	MA	12 29/64x2 1/2x13/64	12 29/64x2 1/2x13/64	1	MA	11 1/2x2 1/2x13/64	11 1/2x2 1/2x13/64	1	1 1/8	1 1/8	1 1/8	4 5/8	1150	NMA	TH	UL	TO
Dodge 6-MD1, 8-MD2	776.0	7.50/14	Hyd	Vac	207.0	60.0	Cdb[1]	11	11	Bon	MA	11 1/2x2 1/2x13/64	11 1/2x2x13/64	1	MA	11 1/2x2 1/2x13/64	11 1/2x2x13/64	1	1 1/8	1 1/8	1 1/8	6	650	NMA	TH	UL	TO
8-MD3	760.0	8.00/14	Hyd	Vac	207.0	60.0	Cdb[1]	11	11	Bon	MA	11 1/2x2 1/2x13/64	11 1/2x2x13/64	1	MA	11 1/2x2 1/2x13/64	11 1/2x2x13/64	1	1 1/8	1 1/8	1 1/8	6	650	NMA	TH	UL	TO
Imperial 8-MY1	719.0	9.50/14	HV	Vac	251.0	60.0	Cen	12	12	Bon	MA	12 29/64x2 1/2x13/64	12 29/64x2 1/2x13/64	1	MA	12 29/64x2 1/2x13/64	12 29/64x2 1/2x13/64	1	1 1/8	1 1/8	1 1/8	4 5/8	1210	NMA	FO	UL	TO
Plymouth 6-MP1, 8-MP2	775.0	7.50/14	Hyd	Vac	184.0	60.0	Cen	11	11	Bon	MA	11 1/2x2x13/64	11 1/2x2x13/64	1	MA	11 1/2x2x13/64	11 1/2x2x13/64	1	1 1/8	1 1/8	1 1/8	6	650	NMA	TH	UL	TO
FORD MOTOR CO.																											
Edsel 6, 8-Ranger	784.0	7.50/14	Hyd	Vac	167.5	55.5	Com	11	11	Riv	MA	9 5/16x2 1/2x7/32	9 5/16x2x7/32	1	MA	12x2 1/2x7/32	12x2x7/32	1	1 1/8	15/16	1	6 1/2	700	.010	FO	UL	RB
8-Corsair	770.0	8.00/14	Hyd	Vac	167.1	55.5	Com	11	11	Riv	MA	9 5/16x2 1/2x7/32	9 5/16x2x7/32	1	MA	12x2 1/2x7/32	12x2x7/32	1	1 1/8	15/16	1	6 1/2	700	.010	FO	UL	RB
Ford 6, 8-Custom 300, Fairlane, Fairlane 500	784.0	7.50/14	Hyd	Vac	......	62.0	Com	11	11	Riv	MA	10 5/8x2 1/4x3/16	10 5/8x1 3/4x3/16	1	MA	11 13/16x2 1/4x1/4	11 13/16x1 3/4x3/16	1	1 1/8	7/8	1	6 1/2	725	.010	FO	UL	RB
8-Thunderbird	772.0	8.00/14	Hyd	Vac	......	62.0	Com	11	11	Riv	MA	10 5/8x2 1/2x3/16	10 5/8x2 1/2x3/16	1	MA	11 13/16x2 1/2x1/4	11 13/16x2 1/2x1/4	1	1 3/32	29/32	1	7	760	......	TH	UL	RB
Lincoln 8-Lincoln, Premiere, Continental	722.0	9.50/14	HV	Vac	262.0	57.7	Com	11	11	Riv	MA	9 21/64x3 1/2x3/16	9 21/64x3 1/2x3/16	1	MA	11 61/64x3 1/2x3/16	11 61/64x3 1/2x3/16	1	1 3/32	15/16	31/32	4 3/4	1150	SA	FT	UL	RB
Mercury 8-Monterey	764.0	8.00/14	Hyd	Vac	205.0	57.0	Com	11	11	Riv	MA	9 9/32x3x3/16	9 9/32x2 1/2x3/16	1	MA	11 13/16x3x3/16	11 13/16x2 1/2x3/16	1	1 1/8	31/32	1	5 3/4	700	.012	FO	UL	RB
8-Montclair	747.0	8.50/14	Hyd	Vac	205.0	57.0	Com	11	11	Riv	MA	9 9/32x3x3/16	9 9/32x2 1/2x3/16	1	MA	11 13/16x3x3/16	11 13/16x2 1/2x3/16	1	1 1/8	31/32	1	5 3/4	700	.012	FO	UL	RB
8-Park Lane	747.0	8.50/14	HV	Vac	205.0	57.0	Com	11	11	Riv	MA	9 9/32x3x3/16	9 9/32x2 1/2x3/16	1	MA	11 13/16x3x3/16	11 13/16x2 1/2x3/16	1	1 1/8	31/32	1	4 1/2	900	.012	FO	UL	RB
GENERAL MOTORS CORP.																											
Buick 8-4400, 4600	735.0	7.60/15	Hyd	Vac	160.0	55.9	Alc[2]	12 1/64	12 1/64	Riv	MA	10 3/64x2 1/2x17/64	10 3/64x2 1/4x7/32	1	MA	12 61/64x2 1/2x17/64	12 61/64x2 1/4x7/32	1	1 1/8	1	1	6 3/4	600	.015	FO	UL	RB
8-4700, 4800	723.0	8.00/15	HV	Vac	160.0	55.9	Alc[2]	12 1/64	12 1/64	Riv	MA	10 3/64x2 1/2x17/64	10 3/64x2 1/4x7/32	1	MA	12 61/64x2 1/2x17/64	12 61/64x2 1/4x7/32	1	1 1/8	1	1	3 3/16	600	.015	FO	UL	RB
Cadillac 8-60, 62	715.0	8.00/15	HV	Vac	210.3	......	Com	12	12	Riv	MA	10 3/64x2 1/2x1/4	10 3/64x2 1/2x1/4	2	MA	12 61/64x2 1/2x1/4	12 61/64x2 1/2x1/4	2	1 1/8	1	31/32	4 1/2	930	.010[3]	FO	UL	RB
8-75	709.0	8.20/15	HV	Vac	233.7	......	Com	12	12	Riv	MA	12 61/64x2 1/2x1/4	12 61/64x2 1/2x1/4	2	MA	12 61/64x2 1/2x1/4	12 61/64x2 1/2x1/4	2	1 1/8	1	31/32	4 1/2	930	.010[3]	FO	UL	RB
Chevrolet 6-1100, 1500, 1700; 8-1200, 1600, 1800	784.0	7.50/14	Hyd	Vac	185.6	56.0	Com	11	11	Bon	MA	9 5/16x2 3/4x11/64	9 5/16x2x11/64	1	MA	11 45/64x2 3/4x11/64	11 45/64x2x11/64	1	1 1/8	1	1	6 13/32	725	ALD	FO	UL	RB
8-867	760.0	6.70/15	Hyd	N	157.0	56.0	Com	11	11	Bon	MA	9 19/64x2x11/64	9 19/64x1 3/4x11/64	1	MA	11 11/16x2x11/64	11 11/16x1 3/4x11/64	1	1 1/8	1	1	4 1/2	700	ALD	TH	UL	RB
Oldsmobile 8-88	735.0	8.50/14	Hyd	Vac	156.8	56.0	Cen	11	11	Riv	......	9 3/8x2 1/2x1/4	9 3/8x2x1/4	1	......	12 1/32x2 1/2x1/4	12 1/32x2x1/4	1	1 1/8	1	1	6 1/2	750	.015	FO	UL	RB
8-Super 88	713.0	9.00/14	Hyd	Vac	156.8	56.0	Cen	11	11	Riv	......	9 3/8x2 1/2x1/4	9 3/8x2x1/4	1	......	12 1/32x2 1/2x1/4	12 1/32x2x1/4	1	1 1/8	1	1	6 1/2	750	.015	FO	UL	RB
8-98	713.0	9.00/14	HV	Vac	156.8	56.0	Cen	11	11	Riv	......	9 3/8x2 1/2x1/4	9 3/8x2x1/4	1	......	12 1/32x2 1/2x1/4	12 1/32x2x1/4	1	1 1/8	1	31/32	3 7/64	850	.015	FO	UL	RB
Pontiac 8-5921, 5924, 5927, 5928	754.0	8.00/14	Hyd	Vac	170.0	58.5	Cen	11	11	Riv	MA	9 19/64x2 1/2x7/32	9 19/64x2x7/32	1	MA	11 13/16x2 1/2x7/32	11 13/16x2 1/2x7/32	1	1 3/16	1	1	7	800	.015[4]	FO	UL	RB
STUDEBAKER-PACKARD CORP.																											
Studebaker 6-59S	795.0	5.90/15	Hyd	Vac	146.4	62.0	Com	10	9	Riv	......	8 13/32x2x3/16	7 9/16x2x3/16	1	......	10 53/64x2x1/4	9 3/4x2x3/16	1	1	13/16	1	6	890	.007	TH	UR	RB
8-59V	770.0	6.40/15	Hyd	Vac	172.8	62.0	Com	11	10	Riv	......	9 21/64x2 1/4x3/16	8 13/32x2x3/16	1	......	11 53/64x2 1/4x7/32	10 53/64x2x3/16	1	1 1/16	7/8	1	6	890	.007	TH	UR	RB
6-59S Silver Hawk	770.0	6.40/15	Hyd	Vac	146.4	62.0	Com	10	9	Riv	......	8 13/32x2x3/16	7 9/16x2x3/16	1	......	10 53/64x2x1/4	9 3/4x2x3/16	1	1	13/16	1	6	890	.007	TH	UR	RB
8-59V Silver Hawk	753.0	6.70/15	Hyd	Vac	172.8	62.0	Com	11	10	Riv	......	9 21/64x2 1/4x3/16	8 13/32x2x3/16	1	......	11 53/64x2 1/4x7/32	10 53/64x2x3/16	1	1 1/16	7/8	1	6	890	.007	TH	UR	RB

ABBREVIATIONS

1—Front only; rear, centrifuse.
2—Front only; rear, cast iron.
3—Top only; bottom, .015.
4—At secondary with primary against drum.

Alc—Aluminum body with cast iron liners.
ALD—Adjust to light drag and back off seven notches.
Bon—Bonded.
Cdb—Cast drum and back.
Cen—Centrifuse.
CIA—Cast iron alloy.
CIS—Cast iron alloy with steel flange.
Com—Composite, cast iron rim with pressed steel web.
FO—Foot operated, hand lever release.
FT—Foot pedal with toe release.
HV—Hydraulic, vacuum assist.
Hyd—Hydraulic, internal expanding.
MA—Molded asbestos.
N—None.
NMA—No major adjustment required.
PH—Pull handle.
RB—Rear service brakes.
Riv—Riveted.
SA—Self adjusting.
TH—"T" handle, multiple-pawl ratchet.
TO—Transmission output shaft.
UL—Under instrument panel, left of steering column.
UR—Under instrument panel, right of steering column.
Vac—Vacuum.

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FRONT SUSPENSION AND STEERING

PASSENGER CAR MAKE AND MODEL 17	Front Suspension Type	Spring Type	Spring Size: Coil Height or Bar Length	Spring Size: Coil I. D. or Bar Diameter	Spring Rate (lb. per in.)	Rate at Wheel (lb. per in.)	Design Load (lb. @ design height)	Shock Absorbers Make	Shock Absorbers Type	Piston Diam. (in.)	Stabilizer—Type	Steering Type	Wheel Diameter	Turning Diameter Wall to Wall (outside front)	Turning Diameter Curb to Curb (outside front)	Outside Wheel Angle with Inside Wheel at 20 Degrees	Mechanical Gear Type	Mechanical Gear Make	Mechanical Ratios (to-1) Gear	Mechanical Ratios (to-1) Over-all	Power Type	Power Make	Power Gear Type	Power Ratios (to-1) Gear	Power Ratios (to-1) Over-all	Pump Driven by	Linkage Type	Linkage Location	Drag Link	Tie Rods
AMERICAN MOTORS CORP.																														
Rambler 6-5900	IDC	Co	10⅝	3½	110	109	755-10⅝	Mon	D	1	N	Mec	17	37'11"	35'7"	17.7	WR	Gem	20.4	22.0	N						BS	F	Tr	2
6-5910	IDC	Co	8⅜	5	98	83	895-8⅜	Mon	D	1	N	Mec	17	39'4½"	37'3"	17.3	RB	Sag	20.0	23.0	Lk	Mon	RB	20.0	18.6	BC	BS	F	Tr	2
8-5920	IDC	Co	8⅜	5	120	102	1075-8⅜	Mon	D	1	N	Mec	17	39'8"	37'7½"	17.2	RB	Sag	24.0	28.8	Lk	Mon	RB	20.0	18.4	BC	BS	R	Tr	2
6-5980	IDC	Co	8⅝	5	90	80	1000-8⅝	Mon	D	1	LI	Mec	17	41'9"	39'9"	17.5	RB	Sag	20.0	25.6	Lk	Mon	RB	20.0	25.4	BC	BS	R	Tr	2
CHRYSLER CORP.																														
Chrysler 8-MC1	ITB	TB	40	63/64		105		Own	D	1	L	Mec	17	46'6"	43'9"	18.8	WTR	Gem	20.4	30.0	In	Own	RS	15.7	19.1	BC	SIA	R	Tr	2
8-MC2	ITB	TB	44	1		115		Own	D	1	L	Pow	17	49'9"	47'0"	18.4	N				In	Own	RS	15.7	19.4	BC	SIA	R	Tr	2
8-MC3	ITB	TB	44	1		115		Own	D	1	L	Pow	17	49'9"	47'2"	18.4	N				In	Own	RS	15.7	19.4	BC	SIA	R	Tr	2
8-MC3, 300-E	ITB	TB	44	1 5/64		170		Own	D	1	L	Pow	17	49'9"	47'2"	18.4	N				In	Own	RS	15.7	19.4	BC	SIA	R	Tr	2
De Soto 8-MS1	ITB	TB	40	1 1/64		125		Own	D	1	N	Mec	17	46'9"	43'9"	18.8	WTR	Own	20.4	30.0	In	Own	RS	15.7	19.1	BC	SIA	R	Tr	2
8-MS2	ITB	TB	44	1		115		Own	D	1	L	Mec	17	49'10"	47'0"	18.5	WTR	Own	20.4	30.6	In	Own	RS	15.7	19.4	BC	SIA	R	Tr	2
8-MS3	ITB	TB	44	1		115		Own	D	1	L	Pow	17	49'10"	47'0"	18.5	N				In	Own	RS	15.7	19.4	BC	SIA	R	Tr	2
Dodge 6-MD1; 8-MD2, MD3	ITB	TB	40	1 1/64		125		Own	D	1	N	Mec	17	46'9"	43'9"	18.8	WTR	Own	20.4	30.0	In	Own	RS	15.7	19.1	BC	SIA	R	Tr	2
Imperial 8-MY1	ITB	TB	48⅝	1 5/64		120		Own	D	1	L	Pow	17	51'4"	48'3"	18.4	N				In	Own	RS	15.7	19.4	BC	SIA	R	Tr	2
Plymouth 6-MP1	ITB	TB	40	31/32		105		Own	D	1	N	Mec	17	44'11"	42'3"	18.8	WTR	Own	18.2	26.8	In	Own	RS	15.7	19.1	BC	SIA	R	Tr	2
8-MP2-L, MP2-M, MP2-H	ITB	TB	40	1 1/64		125		Own	D	1	N	Mec	17	44'11"	42'3"	18.8	WTR	Own	18.2	26.8	In	Own	RS	15.7	19.1	BC	SIA	R	Tr	2
8-MP2-P	ITB	TB	40	1 5/64		145		Own	D	1	N	Mec	17	44'11"	42'3"	18.8	WTR	Own	18.2	26.8	In	Own	RS	15.7	19.1	BC	SIA	R	Tr	2
FORD MOTOR CO.																														
Edsel 6, 8-Ranger; 8-Corsair	IBC	Co	9 21/64	4 1/32	385	88	2350-9 21/64	Var	D	1	L	Mec	17½	44'0"	41'11"	17.0	RBN	Fo	23.6	31.8	Lk	Fo	RBN	20.0	27.0	BC	Par	R	Tr	2
Ford 6-Custom 300, Fairlane, Fairlane 500	IBC	Co	15 21/64	4	400	97	2225-9 21/64	FMG	D	1	L	Mec	17½	43'6"	40'8"	23.4	RB	Fo	20.0	27.0	Lk	Ben	RB	20.0	25.2	BC	Par	R	Tr	2
8-Custom 300, Fairlane, Fairlane 500	IBC	Co	15 21/64	4	400	97	2325-9 21/64	FMG	D	1	L	Mec	17½	43'6"	40'8"	23.3	RB	Fo	20.0	27.0	Lk	Ben	RB	20.0	25.2	BC	Par	R	Tr	2
8-Thunderbird	IBC	Co	9 21/64	4 1/32	400	103	2325-9 21/64	Gab	D	1 1/16	L	Mec	17	42'8"	40'4"	17.1	RBN		20.0	25.0	Lk	Ben	RBN	20.0	25.0	BC	Par	R	Tr	2
Lincoln 8-Lincoln, Premiere, Continental	IBC	Co	11 1/16	4¼	400	106	2900-11 1/16	GM	D	1 1/16	L	Pow	17	47'10"	45'0"	17.3	N				In	Fo	RB	17.0	19.5	BC	Par	R	Tr	2
Mercury 8-Monterey	IBC	Co	10½	4 1/32	410	95	2590-10½	GM	D	1	L	Mec	17		43'11"		RBR	Fo	23.6	29.0	Lk	Ben	RBR	20.0	20.5	BC	Par	R	Tr	2
8-Montclair	IBC	Co	10½	4 1/32	440	99	2730-10½	GM	D	1	L	Mec	17		43'11"		RBR	Fo	23.6	31.0	Lk	Ben	RBR	20.0	20.5	MC	Par	R	Tr	2
8-Park Lane	IBC	Co	10½	4 1/32	470	106	2830-10½	GM	D	1	L	Pow	17		43'10"		N				Lk	Ben	RBR	20.0	20.5	MC	Par	R	Tr	2
GENERAL MOTORS CORP.																														
Buick 8-4400	IBC	Co			375	92	2360-	Del	D	1	N	Mec	17	46'10"	44'0"	18.0	RBN	Sag	23.6	28.8	In	Sag	RBN	17.5	19.7	BC	Par	R	Tr	2
8-4600	IBC	Co			380	93	2430-	Del	D	1	N	Mec	17	46'10"	44'0"	18.0	RBN	Sag	23.6	28.8	In	Sag	RBN	17.5	19.7	BC	Par	R	Tr	2
8-4700, 4800	IBC	Co			400	97	2500-	Del	D	1	N	Pow	17	48'4"	45'9"	18.0	N				In	Sag	RBN	17.5	19.7	BC	Par	R	Tr	2
Cadillac 8-60, 62	IDC	Co	17 1/16	4	375	102	2600-10 3/64	Del	D	1	L	Pow	17			22.7	N				In	Sag	BNS	17.5	18.9	BC	PDL	R	Tr	2
8-75	IDC	Co	17 1/16	4	475	129	2800-10½	Del	D	1	L	Pow	17			22.7	N				In	Sag	BNS	17.5	18.9	BC	PDL	R	Tr	2
Chevrolet 6-1100, 1500	IBC	Co	10 19/64	3 13/16	370	129	1855-10 19/64	Del	D	1	N	Mec	17	43'7"	40'10"	17.9	RB	Sag	24.0	28.0	Lk	Sag	RB	20.0	24.0	GS	RL	F	N	2
6-1700	IBC	Co	10 19/64	3 13/16	370	129	1855-10 19/64	Del	D	1	L	Mec	17	43'7"	40'10"	17.9	RB	Sag	24.0	28.0	Lk	Sag	RB	20.0	24.0	GS	RL	F	N	2
8-1200, 1600, 1800	IBC	Co	10 19/64	3 13/16	275	96	1855-10 19/64	Del	D	1	L	Mec	17	43'7"	40'10"	17.9	RB	Sag	24.0	28.0	Lk	Sag	RB	20.0	24.0	GS	RL	F	N	2
8-867	IBC	Co	9⅝	3	300	110	1235-9⅝	Del	D	1	L	Mec	17	39'0" Le	37'0" Le	17.0	WBS	Sag	16.0	21.0	N						CP	R	Lo	2
Oldsmobile 8-88, Super 88	IDC	Co	11	4 3/64	300	100	2430-11	Del	D	1	L	Mec	17½	48'1"	46'3"		BN	Sag	23.6	29.4	In	Sag	BN	17.5	21.8	BC	Sym	R	Tr	2
8-98	IDC	Co	11	4 3/64	300	100	2500-11	Del	D	1	L	Pow	17	47'1"	44'1"		N				In	Sag	BN	17.5	21.8	BC	Sym	R	Tr	2
Pontiac 8-5921	IBC	Co	10 19/64	4 3/64	315	90	2090-10 19/64	Del	D	1	L	Mec	17½	45'8"	42'9"	19.0	RBB	Sag	24.0	29.0	In	Sag	RBB	17.5	22.0	BC	LP	R	Tr	2
8-5924, 5927, 5928	IBC	Co	10 19/64	4 3/64	315	90	2090-10 19/64	Del	D	1	L	Mec	17	46'9"	43'10"	19.0	RBB	Sag	24.0	29.0	In	Sag	RBB	17.5	22.0	BC	LP	R	Tr	2
STUDEBAKER-PACKARD CORP.																														
Studebaker 6-59S	IDC	Co	10 21/64	4 1/16	250	67	1070-10 21/64	Gab	D	1	N	Mec	17	40'0"	37'6"	17.5	CTL	Ro	15.4	25.0	N						CP	R	Lo	2
8-59V	IDC	Co	9 21/64	4 3/16	278	78	1290-9 21/64	Gab	D	1	L	Mec	17"	40'0"	37'6"	17.5	CRS	Ro	22.0	27.5	Lk	Ben	CRS	22.0	27.5	BC	CP	R	Lo	2
6-59-S Silver Hawk	IDC	Co	10 21/64	4 1/16	250	67	1070-10 21/64	Gab	D	1	N	Mec	17	45'4"	42'6"	17.5	CRS	Ro	22.0	27.5	N						CP	R	Lo	2
8-59-V Silver Hawk	IDC	Co	9 21/64	4 3/16	278	78	1290-9 21/64	Gab	D	1	L	Mec	17	45'4"	42'6"	17.5	CRS	Ro	22.0	27.5	In	Sag	RB	19.0	26.5	BC	CP	R	Lo	2

ABBREVIATIONS

BC—Belt from crankshaft pulley.
Ben—Bendix.
BN—Ball nut.
BNS—Ball nut and sector.
BS—Ball and socket.
Co—Coil.
CP—Center point with equal length tie rods.
CRS—Cam and single roller stud.
CTL—Cam and twin lever.
D—Direct acting.
Del—Delco.
F—Front of wheels.
FMG—Ford, Monroe or Gabriel.
Fo—Ford.
Gab—Gabriel. **Gem**—Gemmer.
GM—Gabriel or Monroe.
GS—Pump on extension of generator shaft.
IBC—Independent short and long arm suspension with ball joints and coil springs.
IDC—Independent direct action coil springs.
In—Integral.
ITB—Independent, lateral, non-parallel control arms with torsion bars.
L—Link. **Le**—Left turn.
Lk—Linkage, power assist.
LI—Linkless.
Lo—Longitudinal.
LP—Link parallelogram.
MC—Pump mounted directly on crankshaft.
Mec—Mechanical.
Mon—Monroe. **N**—None.
Par—Parallelogram.
PDL—Parallel drag link.
Pow—Power.
R—Rear of wheels.
RB—Recirculating ball.
RBB—Recirculating ball bearing.
RBN—Recirculating ball nut.
RBR—Recirculating ball and rack.
RL—Relay link.
Ro—Ross.
RS—Rack and sector.
Sag—Saginaw.
SIA—Symmetrical idler arm, equal length tie rods.
Sym—Symmetrical.
TB—Torsion bar.
Tr—Transverse.
Var—Various.
WBS—Worm and ball bearing sector.
WR—Worm and roller.
WTR—Worm and three tooth roller.

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WHEEL ALIGNMENT, AND REAR SUSPENSION

ALIGNMENT

PASSENGER CAR MAKE AND MODEL 18	Steering Axis: Inclination at Camber (deg.)	Steering Axis Bearings: Upper	Lower	Thrust	Wheel Alignment: Caster (deg.)	Camber (deg.)	Toe In (Outside tread—in.)	Steering Spindle and Joint Type	Wheel Spindle Diameter: Inner Bearing	Outer Bearing	Thread Size	Bearing Type
AMERICAN MOTORS CORP.												
Rambler 6-5900	8 1/2° @ 0°	Bu	Th	Ba	0 to 1/2P	1/4N to 1/4P	1/16 to 3/16	IK	1.2500	.7500	3/4-16	TR
6-5910	6° 41′ @ 0°	BN	Th	Ba	0 to 1/2P	1/4N to 1/4P	1/16 to 3/16	IK	1.2500	.7500	3/4-16	TR
8-5920	6° 41′ @ 0°	Ne	Th	Ba	0 to 1/2P	1/4N to 1/4P	1/16 to 3/16	IK	1.2500	.7500	3/4-16	TR
8-5980	6° 41′ @ 0°	Ne	Th	Ba	0 to 1/2P	1/4N to 1/4P	1/16 to 3/16	IK	1.2500	.7500	3/4-16	TR
CHRYSLER CORP.												
Chrysler 8-MC1	6 1/2° @ 0°	BJ	BJ	Bu	0 to 1 1/2N	0 to 1/2P[1]	3/32 to 5/32	BS	1.2500	.7500	3/4-16	TR
8-MC2	6 1/2° @ 0°	BJ	BJ	Bu	0 to 1 1/2P	0 to 1/2P[1]	3/32 to 5/32	BS	1.2500	.7500	3/4-16	TR
8-MC3	6 1/2° @ 0°	BJ	BJ	Bu	0 to 1 1/2P	0 to 1/2P[1]	3/32 to 5/32	BS	1.2500	.7500	3/4-16	TR
8-MC3-H, 300-E	6 1/2° @ 0°	BJ	BJ	Bu	0 to 1 1/2P	0 to 1/2P[1]	3/32 to 5/32	BS	1.2500	.7500	3/4-16	TR
De Soto 8-MS1	6 1/2° @ 0°	BJ	BJ	Bu	0 to 1 1/2N	0 to 1/2P[1]	3/32 to 5/32	BS	1.2500	.7500	3/4-16	TR
8-MS2	6 1/2° @ 0°	BJ	BJ	Bu	0 to 1 1/2N	0 to 1/2P[1]	3/32 to 5/32	BS	1.2500	.7500	3/4-16	TR
8-MS3	6 1/2° @ 0°	BJ	BJ	Bu	0 to 1 1/2P	0 to 1/2P[1]	3/32 to 5/32	BS	1.2500	.7500	3/4-16	TR
Dodge 6-MD1	6 1/2° @ 0°	BJ	BJ	Bu	0 to 1 1/2N	0 to 1/2P[1]	3/32 to 5/32	BS	1.2500	.7500	3/4-16	TR
8-MD2	6 1/2° @ 0°	BJ	BJ	Bu	0 to 1 1/2N	0 to 1/2P[1]	3/32 to 5/32	BS	1.2500	.7500	3/4-16	TR
8-MD3	6 1/2° @ 0°	BJ	BJ	Bu	0 to 1 1/2N	0 to 1/2P[1]	3/32 to 5/32	BS	1.2500	.7500	3/4-16	TR
Imperial 8-MY1	6 1/2° @ 0°	BJ	BJ	Bu	0 to 1 1/2P	0 to 1/2P[1]	3/32 to 5/32	BS	1.3750	.8440	3/4-16	TR
Plymouth 6-MP1	6 1/2° @ 0°	BJ	BJ	Bu	0 to 1 1/2N	0 to 1/2P[1]	3/32 to 5/32	BS	1.2500	.7500	3/4-16	TR
8-MP2-L, MP2-M, MP2-H	6 1/2° @ 0°	BJ	BJ	Bu	0 to 1 1/2N	0 to 1/2P[1]	3/32 to 5/32	BS	1.2500	.7500	3/4-16	TR
8-MP2-P	6 1/2° @ 0°	BJ	BJ	Bu	0 to 1 1/2N	0 to 1/2P[1]	3/32 to 5/32	BS	1.2500	.7500	3/4-16	TR
FORD MOTOR CO.												
Edsel 6, 8-Ranger; 8-Corsair	6 3/4°	BJ	BJ	TB	0 to 1P	1/2P to 1 1/2P	1/16 to 1/8	BS	1.1200	.7500	3/4-16	TR
Ford 6, 8-Custom 300, Fairlane, Fairlane 500	6 3/4° @ 1°	BJ	BJ	FW	0 to 1P	1/2P to 1 1/2P	3/32 to 1/8	BS	1.2496	.7496	......	CR
8-Thunderbird	6 3/4° @ 1°	BJ	BJ		1/2P to 1 1/2P	1/2P to 1 1/2P	1/16 to 1/8	BS	1.2496	.7496	......	CR
Lincoln 8-Lincoln, Premiere, Continental	7° 26′ @ 3/4°	BJ	BJ	Ba	0 to 1 1/2N	0 to 3/4P	1/8 to 3/16	BS	1.3750	.8430	3/4-16	TR
Mercury 8-Monterey, Montclair	7° @ 3/4°	BJ	BJ	TB	0 to 1 1/2N	0 to 3/4P	1/16 to 3/16	BJ	1.2496	.7496	3/4-16	TR
8-Park Lane	7° @ 3/4°	BJ	BJ	TB	0 to 1 1/2N	0 to 3/4P	1/16 to 3/16	BJ	1.3746	.8433	3/4-16	TR
GENERAL MOTORS CORP.												
Buick 8-4400, 4600	7° @ 50′	BJ	BJ	BJ	1 1/2N	1/2P	1/16 to 5/32	BJ	1.3740	.8430	13/16-16	Ba
8-4700	7° @ 50′	BJ	BJ	BJ	1 1/2N	1/2P	1/16 to 5/32	BJ	1.3740	.8430	13/16-16	Ba
8-4800	7° @ 50′	BJ	BJ	BJ	1 1/2N	1/2P	1/16 to 5/32	BJ	1.3740	.8430	13/16-16	Ba
Cadillac 8-60, 62	4° @ 0°	SJ	SJ	SJ	1/2N to 1 1/2N	3/8N to 3/8P	7/32 to 9/32	......	2.9630	2.2500	3/4-20	Ba
8-75	4° @ 0°	SJ	SJ	SJ	1/2N to 1 1/2N	3/8N to 3/8P	7/32 to 9/32	......	2.9630	2.2500	3/4-20	Ba
Chevrolet 6-1100, 1500, 1700	7° 11′	SJ	SJ	SJ	1/2N to 1/2P	0 to 1P	1/16 to 1/8	......	1.2495	.7494	3/4-20	Ba
8-1200, 1600, 1800	7° 11′	SJ	SJ	SJ	1/2N to 1/2P	0 to 1P	1/16 to 1/8	......	1.2495	.7494	3/4-20	Ba
8-867	4°	Bu	Bu	Ba	1 1/2P to 2 1/2P	1/2N to 1/2P	0 to 1/8	RE	1.2813	.7501	3/4-20	Ba
Oldsmobile 8-88, Super 88	10° @ 0°	BJ	BJ	BJ	0 to 1N	1/4N to 3/4P	0 to 1/8	BJ	1.3739	.8430	13/16-16	BC
8-98	10° @ 0°	BJ	BJ	BJ	0 to 1N	1/4N to 3/4P	0 to 1/8	BJ	1.3739	.8430	13/16-16	BC
Pontiac 8-5921	4° 50′ @ 0°	BJ	BJ	BJ	1N to 2N	1/4N to 3/4P	0 to 1/16	BJ	1.2490	.7490	3/4-20	Ba
8-5924, 5927, 5928	4° 50′ @ 0°	BJ	BJ	BJ	1N to 2N	1/4N to 3/4P	0 to 1/16	BJ	1.2490	.7490	3/4-20	Ba
STUDEBAKER-PACKARD CORP.												
Studebaker 6-59S, 8-59V	6° @ 0°	Bu	Ne	Ba	1N to 2 1/2N	0 to 1N	1/16 to 1/8	RE	1.2500	.7500	3/4-16	TR
6-59S Silver Hawk	6° @ 0°	Bu	Ne	Ba	1N to 2 1/2N	0 to 1N	1/16 to 1/8	RE	1.2500	.7500	3/4-16	TR
8-59V Silver Hawk	6° @ 0°	Bu	Ne	Ba	1N to 2 1/2N	0 to 1N	1/16 to 1/8	RE	1.2500	.7500	3/4-16	TR

REAR SUSPENSION

PASSENGER CAR MAKE AND MODEL	Type	Spring: Type	Material	Size: Length or Height	Width or Bar Diameter	No. of Leaves or Coil I. D.	Spring Rate (lb. per in.)	Rate at Wheel (lb. per in.)	Design Load (lb. at design height)	Shock Absorbers: Make	Type	Piston Diameter
AMERICAN MOTORS CORP.												
Rambler 6-5900	Ho	Le	5155	45	1 3/4	5	100	100	650-46 1/16	Mon	D	1
6-5910	TC	Co	9260	10 11/16	......	4 7/8	96	96	770-10 11/16	Mon	D	1
8-5920	TC	Co	9260	10 11/16	......	4 7/8	96	96	770-10 11/16	Mon	D	1
8-5980	TC	Co	9260	10 1/8	......	4 7/8	100	100	900-10 1/8	Mon	D	1
CHRYSLER CORP.												
Chrysler 8-MC1	PL	SE	St	57	2 1/2	5	95	130	800-57 3/8L	Own	D	1
8-MC2	PL	SE	St	60	2 1/2	6	90	135	760-60 3/8L	Own	D	1
8-MC3	PL	SE	St	60	2 1/2	7	90	135	800-60 3/8L	Own	D	1
8-MC3-H, 300-E	PL	SE	St	60	2 1/2	7	135	165	700-60 3/8L	Own	D	1
De Soto 8-MS1	PL	SE	St	57	2 1/2	5	95	130	......	Own	D	1
8-MS2	PL	SE	St	60	2 1/2	6	90	135	760-60 3/8L	Own	D	1
8-MS3	PL	SE	St	60	2 1/2	6	90	135	760-60 3/8L	Own	D	1
Dodge 6-MD1	PL	Le	St	57	2 1/2	4	95	130	720-57L	Own	D	1
8-MD2	PL	Le	St	57	2 1/2	5	95	130	720-57L	Own	D	1
8-MD3	PL	Le	St	57	2 1/2	5	95	130	760-57L	Own	D	1
Imperial 8-MY1	LS	SE	St	60	2 1/2	7	90	140	920-60 3/8L	Own	D	1
Plymouth 6-MP1	PL	SE	St	55	2 1/2	4	93	128	720-55 3/8L	Own	D	1
8-MP2-L, MP2-M, MP2-H	PL	SE	St	55	2 1/2	5	95	130	760-55 3/8L	Own	D	1
8-MP2-P	PL	SE	St	55	2 1/2	5	95	165	760-55 3/8L	Own	D	1
FORD MOTOR CO.												
Edsel 6, 8-Ranger; 8-Corsair	Ho	SE	5160	58	2 1/2	5	95	115	875-58	Var	D	1
Ford 6, 8-Custom 300, Fairlane, Fairlane 500	LL	SE	St	55	2	4	107	107	850-55	FMG	D	1
8-Thunderbird	Ho	Le	St	55	2 1/2	6	130	120	985-55	Gab	D	1 1/16
Lincoln 8-Lincoln, Premiere, Continental	TA	Co	9260	9 21/64	......	4 43/64	260	145	1740-9 21/64	GM	D	1 1/16
Mercury 8-Monterey, Montclair	LL	SE	5147	60	2 1/2	6	85	......	925-60	GM	D	1
8-Park Lane	LL	SE	5147	60	2 1/2	5	100	......	1000-60	GM	D	1
GENERAL MOTORS CORP.												
Buick 8-4400, 4600	CS	Co	9260	10 1/2	......	5 1/2	110	110	1055-10 1/2	Del	D	1
8-4700	CS	Co	9260	10 1/2	......	5 1/2	115	115	1125-10 1/2	Del	D	1
8-4800	CS	Co	9260	10 1/2	......	5 1/2	125	125	1205-10 1/2	Del	D	1
Cadillac 8-60, 62	FL	Co	9260	16 1/2[2]	......	5 13/64	225	141	......	Del	D	1
8-75	FL	Co	9260	16 7/8	......	5 13/64	265	166	......	Del	D	1
Chevrolet 6-1100, 1500, 1700	FL	Co	HAS	9 25/64	37/64	3 39/64	265	112	1560-9 25/64	Del	D	1
8-1200, 1600, 1800	FL	Co	HAS	9 25/64	37/64	3 5/8	230	101	1560-9 25/64	Del	D	1
8-867	LS	SE	CCS	51	2	4	115	......	725-51 5/64	Del	D	1
Oldsmobile 8-88, Super 88	LL	SE	5155	58	2 1/2	5	95	115	1000-58	Del	D	1
8-98	LL	SE	5155	58	2 1/2	5	100	120	1025-58	Del	D	1
Pontiac 8-5921	PC	Co	9260	11 13/64	......	4 5/8	175	105	1350-11 13/64	Del	D	1
8-5924, 5927, 5928	PC	Co	9260	11 13/64	......	4 5/8	205	125	1380-11 13/64	Del	D	1
STUDEBAKER-PACKARD CORP.												
Studebaker 6-59S, 8-59V	LS	SE	5160	51	2 1/2	4	88	108	700-51	Gab	D	1
6-59S Silver Hawk	LS	SE	5160	54	2 1/2	4	85	95	700-54	Gab	D	1
8-59V Silver Hawk	LS	SE	5160	54	2 1/2	5	90	100	700-54	Gab	D	1

ABBREVIATIONS

[1]—Left side only; right side, 1/4N to 1/4P.
[2]—El Dorado models, 16 3/4.
Ba—Ball. **BC**—Ball and cone.
BJ—Ball joint.
BN—Bushing and needle bearing.
BS—Ball socket.
Bu—Bushings.
CCS—Chrome carbon steel.
Co—Coil.
CR—Cone and roller.
CS—Coil spring.
D—Direct acting. **Del**—Delco.
FL—Four link.
FMG—Ford, Monroe or Gabriel.
FW—Friction material washer.
Gab—Gabriel.
GM—Gabriel or Monroe.
HAS—High alloy steel.
Ho—Hotchkiss.
IK—Integral with kingpin.
L—Left side.
Le—Leaf.
LL—Longitudinal leaf.
LS—Parallel, longitudinal leaf with two parallel struts.
Mon—Monroe.
N—Negative.
Ne—Needle bearings.
P—Positive.
PC—Pivoted control arm.
PL—Parallel, longitudinal leaf.
RE—Reverse Elliot.
SE—Semi-elliptical.
SJ—Spherical joints.
St—Steel.
TA—Trailing arms and coil springs.
TB—Teflon bearing.
TC—Torque tube drive with coil springs.
Th—Threaded.
TR—Tapered roller.
Var—Various.

For Directory of Car Manufacturers listed above, see Table of Contents

FOREIGN PASSENGER CARS ... 1959

Make and Model	ENGINE: Location in Chassis	Number of Cylinders Bore and Stroke (In.)	Max. Brake Horsepower at Specified R.P.M.	B.M.E.P. at Max. Horsepower (Lb./Sq. In.)	Piston Displacement (Cu. In.)	Compression Ratio (To—1)	Cylinder Arrangement	Valve Location	Camshaft Drive	CHASSIS: Wheelbase (In.)	Tread (In.) Front	Tread (In.) Rear	Overall Dimensions (In.) Length Including Bumpers and Bumper Guards	Overall Dimensions (In.) Width	Overall Dimensions (In.) Height—Road to Roof, No Load	Tires (In.)	Carburetors—No. Used and Type	Cooling Medium	Shifting Method	No. of Forward Speeds	Final Drive Type	Front Suspension Type	Rear Suspension Type	Service Brakes	Cooling System Capacity (Qt.)	Fuel Tank Capacity (Gal.)
GREAT BRITAIN																										
A.C. Ace	Fr	6-2.59x3.90	90-4500	132	121.4	8.00	IL	IH	Ch	78.0	50.0	50.0	104.0	59.0	49.0	5.50/16	3-Ho	W	HS	4	Hy	LS	LS	H	11	15.7
Ace	Fr	6-2.59x3.78	120-6000	133	119.0	8.50	IL	IH	Ch	78.0	50.0	50.0	104.0	59.0	49.0	5.50/16	3-Do	W	HS	4	Hy	LS	LS	H	11	15.7
Aceca	Fr	6-2.59x3.90	90-4500	132	121.4	8.00	IL	IH	Ch	78.0	50.0	50.0	160.0	61.0	52.0	5.50/16	3-Ho	W	HS	4	Hy	LS	LS	H	11	15.7
Aceca	Fr	6-2.60x3.78	105-5000	137	121.5	8.50	IL	IH	Ch	78.0	50.0	50.0	160.0	61.0	52.0	5.50/16	3....	W	HS	4	Hy	LS	LS	H	11	15.7
Aceca	Fr	6-2.59x3.78	120-6000	133	119.0	8.50	IL	IH	Ch	78.0	50.0	50.0	160.0	61.0	52.0	5.50/16	3-Do	W	HS	4	Hy	LS	LS	H	11	15.7
Alvis TD-21	Fr	6-3.31x3.54	104-4000	100	182.6	8.00	IL	IH	Ch	111.5	54.6	54.1	188.5	66.0	60.0	6.00/15	2-SS	W	HS	4	SH	CS	LS	H	12	17.2
Armstrong-Siddeley Sapphire 346	Fr	6-3.54x3.54	125-4700	100	209.6	7.00	IL	IH	Ch	133.0	56.6	57.5	212.0	72.0	66.0	7.00/16	1-SD	W	HA	4	Hy	CS	CS	H	14	16.0
Star Sapphire	Fr	6-3.82x3.54	165-4250	125	243.5	7.50	IL	IH	Ch	114.0	57.9	57.5	194.0	74.0	62.0	6.70/16	2-SD	W	Au	3	Hy	CS	CS	HV	13	16.0
Aston Martin DB Mk III	Fr	6-3.07x3.27	202-5500	130	178.3	8.20	IL	TO	Ch	99.0	54.0	54.0	171.5	65.0	54.3	6.00/16	2-SS	W	HS	4	Hk	CS	CS	H	14½	18.8
DB4	Fr	6-3.62x3.62	240-5500	154	223.8	8.20	IL	TO	Ch	98.0	54.0	53.5	176.4	66.0	51.5	6.00/16	2-SS	W	HS	4	Hk	CS	CS	H	14	22.9
Austin A35	Fr	4-2.48x3.00	34-4750	98	57.8	8.30	IL	IH	Ch	79.5	45.3	44.8	136.6	55.1	59.1	5.20/13	1-SD	W	HS	4	Hy	CS	LT	HM	5	6.9
A40	Fr	4-2.48x3.00	34-4750	98	57.8	8.30	IL	IH	Ch	83.5	47.5	47.0	144.3	59.4	52.8	5.20/13	1-SD	W	HS	4	Hy	CS	LS	H	5	7.3
A55	Fr	4-2.88x3.50	51-4250	96	90.9	8.30	IL	IH	Ch	99.3	48.5	49.0	166.9	61.5	60.3	5.90/13	1-SD	W	HS	4	Hy	CS	LS	H	7¼	10.6
A95	Fr	6-3.13x3.80	92-4500	100	161.0	8.25	IL	IH	Ch	105.8	56.5	51.3	189.8	64.0	62.0	6.40/15	1-SD	W	HA	4	Hy	CS	LS	H	15	19.3
A105	Fr	6-3.13x3.80	102-4600	92	161.0	8.25	IL	IH	Ch	105.8	56.5	51.3	189.8	64.0	62.0	6.40/15	2-SS	W	HA	4	Hy	CS	LS	H	15	19.3
Austin-Healey Sprite	Fr	4-2.48x3.00	43-5200	113	57.9	8.30	IL	IH	Ch	80.0	45.8	44.8	132.6	53.0	49.8	5.20/13	2-Sd	W	HS	4	Hk	CS	LS	H	.....	7.2
100-6	Fr	6-3.13x3.13	117-5000	115	161.1	8.70	IL	IH	Ch	91.7	48.8	50.0	157.5	60.0	49.0	5.90/15	2-Sd	W	HS	4	Hk	CS	LS	H	10	15.0
Bentley Continental	Fr	6-3.75x4.50	....	.....	298.0	8.00	IL	IS	G	123.0	58.0	60.0	210.5	72.0	62.0	7.60/15	2-SS	W	Au	4	Hk	CS	LS	HM	16	21.6
S	Fr	6-3.75x4.50	....	.....	298.0	8.00	IL	IS	G	123.0	58.0	60.0	212.0	74.5	64.3	8.20/15	2-SS	W	Au	4	Hk	CS	LS	HM	16½	21.6
S	Fr	6-3.75x4.50	....	.....	298.0	8.00	IL	IS	G	127.0	58.0	60.0	215.8	74.5	64.3	8.20/15	2-SS	W	Au	4	Hk	CS	LS	HM	16½	21.6
Berkeley Twosome	Fr	3-2.26x2.42	30-5500	72	30.0	7.50	IL	N	N	70.0	42.5	42.0	123.0	50.0	46.0	5.20/12	3-SS	A	HS	4	Ch	CS	CS	H	N	6.6
Foursome	Fr	3-2.28x2.44	30-5500	72	30.0	7.50	IL	N	N	78.0	46.3	46.0	131.0	54.0	46.0	5.20/12	3-SS	A	HS	4	Ch	CS	CS	H	N	6.6
Citroen 2CV	Fr	2-2.58x2.42	14-3500	62	25.9	7.00	Op	IH	G	81.5	49.6	49.6	148.8	58.3	63.0	5.25/15	1-SD	A	HS	4	SB	CS	CS	H	N	4.3
ID19	Fr	4-3.04x3.90	66-4500	100	116.5	7.50	IL	IH	Ch	123.0	59.0	51.3	189.0	70.5	59.9	6.40/15	1-SD	W	HS	4	SB	HP	HP	H	8⅝	14.0
DS19	Fr	4-3.04x3.90	75-4500	113	116.5	7.50	IL	IH	Ch	123.0	59.0	51.0	189.0	70.5	59.9	6.40/15	1-DD	W	Pr	4	SB	HP	HP	H	9¾	14.0
Daimler Majestic	Fr	6-3.40x4.25	147-4400	115	231.0	7.50	IL	IH	Ch	114.0	56.0	57.0	196.0	73.3	62.3	6.50/16	2-SS	W	Au	3	Hk	CS	LS	HV	11¾	18.0
DK400	Fr	6-3.75x4.25	167-3800	124	281.0	7.00	IL	IH	Ch	130.0	60.0	63.0	217.0	77.0	70.0	7.50/16	2-SS	W	Pr	4	Hk	CS	LS	HV	18	20.0
Fairthorpe Atomota	Fr	2-2.77x3.60	34-5750	140	40.0	6.50	IL	IH	G	81.0	49.0	48.5	129.0	60.0	48.0	5.20/13	1-SS	A	HS	4	TT	CS	CS	H	N	8.5
Electron Minor	Fr	4-2.48x2.99	38-5000	133	57.8	8.00	IL	IH	Ch	81.0	49.0	48.5	132.0	58.0	46.0	5.60/13	1-SD	W	HS	4	TT	CS	CS	H	5	10.0
Electron	Fr	4-2.85x2.63	89-6800	325	67.0	10.50	IL	OC	Ch	82.0	49.0	45.5	138.0	58.0	46.0	5.20/15	2-SS	W	HS	4	TT	CS	CS	H	5	10.0
Ford Popular	Fr	4-2.50x3.64	30-4000	84	71.6	6.16	IL	L	Ch	90.0	45.0	45.0	152.3	56.5	63.8	4.50/17	1-SD	W	HS	3	TT	LS	LS	M	5	7.0
Escort	Fr	4-2.50x3.64	38-4500	89	71.6	7.00	IL	L	Ch	87.0	48.0	47.5	140.4	60.8	62.8	5.60/13	1-SD	W	HS	3	Hk	CS	LS	H	6	7.0
Squire	Fr	4-2.50x3.64	38-4500	89	71.6	7.00	IL	L	Ch	87.0	48.0	47.5	141.8	60.8	62.8	5.60/13	1-SD	W	HS	3	Hk	CS	LS	H	6	7.0
Anglia, Perfect	Fr	4-2.50x3.64	38-4500	89	71.6	7.00	IL	L	Ch	87.0	48.0	47.5	149.8	60.6	58.8	5.20/13	1-SD	W	HS	3	Hk	CS	LS	H	6	7.0
Consul Mk II	Fr	4-3.25x3.13	61-4400	102	103.9	7.80	IL	L	Ch	104.5	53.0	52.0	172.0	68.6	61.5	5.90/13	1-SD	W	HS	3	Hk	CS	LS	H	9	10.5
Zephyr	Fr	6-3.25x3.13	90-4400	100	155.8	7.80	IL	IH	Ch	107.0	53.0	52.0	178.5	68.9	62.0	6.40/13	1-SD	W	HA	3	Hk	CS	LS	H	11	10.5
Zodiac	Fr	6-3.25x3.13	90-4400	100	155.8	7.80	IL	IH	Ch	107.0	53.0	52.0	180.5	68.9	62.0	6.40/13	1-SD	W	HA	3	Hk	CS	LS	H	11	10.5
Frisky Convertible & Coupe	R	2-2.22x2.48	16-5500	58	19.8	7.25	IL	N	N	60.0	48.3	32.0	110.0	55.5	48.0	4.40/10	1-SS	A	HS	4	Ch	CS	CS	H	N	4.0
Sprint	R	3-2.28x2.44	34-5700	89	29.0	8.25	IL	N	N	68.0	49.0	47.0	122.5	56.0	37.5	5.20/10	3-SS	A	HS	4	Ch	CS	CS	H	N	9.7
Hillman Husky Series I	Fr	4-3.00x3.00	43-4000	100	85.0	7.00	IL	IH	Ch	86.0	49.0	48.5	149.5	62.0	62.0	5.00/15	1-SD	W	HS	4	TT	CS	CS	H	6⅛	6.3
Minx Series III	Fr	4-3.11x3.00	53-4400	129	91.2	8.50	IL	IH	Ch	96.0	49.0	48.5	162.7	60.8	59.5	5.60/15	1-SD	W	HS	4	TT	CS	LS	H	6⅛	7.3
Humber Hawk	Fr	4-3.19x4.33	78-4400	131	138.2	7.50	IL	IH	Ch	110.0	56.0	55.5	184.5	69.5	61.0	6.00/15	1-SD	W	HA	4	TT	CS	LS	H	10	11.5
Super Snipe Series I	Fr	6-3.25x3.25	112-5000	129	161.5	7.50	IL	IH	Ch	110.0	56.5	55.5	184.8	69.5	61.0	6.70/15	1-SD	W	HA	3	TT	CS	LS	H	13	12.5
Jaguar 2.4 Litre	Fr	6-3.27x3.01	112-5750	140	151.5	8.00	IL	OC	Ch	107.2	54.6	50.1	180.8	66.8	57.5	6.40/15	2-Do	W	HA	4	Hk	CS	LS	H	12	14.5
XK 150 DHC & FHC	Fr	6-3.27x4.17	210-5500	155	210.0	8.00	IL	OC	Ch	102.0	51.6	51.6	177.0	64.5	55.0	6.00/16	2-SD	W	HA	4	Hk	TB	LS	H	14	16.8
3.4 Litre	Fr	6-3.27x4.17	210-5500	155	210.0	8.00	IL	OC	Ch	107.2	54.6	50.1	180.8	66.8	57.5	6.40/15	2-Sd	W	HA	4	Hk	CS	LS	H	13¼	14.5
Mark VIII	Fr	6-3.27x4.17	210-5500	155	210.0	8.00	IL	OC	Ch	120.0	56.5	58.0	196.5	73.0	63.0	6.70/16	2-Sd	W	HA	4	Hk	TB	LS	H	13¼	20.5
Mark IX	Fr	6-3.43x4.17	220-5500	157	230.6	8.00	IL	OC	Ch	120.0	56.5	58.0	196.5	73.0	63.0	6.70/16	2-Sd	W	HA	4	Hk	TB	LS	H	13¼	20.5
XK 150 Type S	Fr	6-3.27x4.17	250-5500	172	210.0	9.00	IL	OC	Ch	102.0	51.6	51.6	176.0	64.5	52.5	6.00/16	3-Sd	W	HS	4	Hk	TB	LS	H	14	16.8
Jensen 541R & Deluxe	Fr	6-3.40x4.37	150-3750	131	243.0	6.80	IL	IH	Ch	105.0	51.9	51.4	178.0	63.0	53.0	6.40/15	3-Sd	W	HS	4	Hy	CS	LS	H	15½	15.0
Lotus 7	Fr	4-........	40-4500	99	71.5	8.50	IL	L		78.0	47.0	47.0	123.0	53.0		5.20/15	.....	W	HS	3	Hy	CS	CS	H	.....	7.0
Elite Coupe	....	4-2.97x2.60	71-6100	124	74.2	8.50	IL	IH	Ch	88.0	47.0	47.0	144.0	58.0	46.0	4.90/15	1-St	W	HS	4	Hy	.....	.....	H	6	8.5
II Lemans 85	....	4-2.82x2.60	85-6800	148	66.9	9.80	IL	IH	Ch	88.0	47.0	47.0	134.0	60.0	27.0	4.50/15	2-Ho	W	HS	4	Hy	.....	.....	H	6	10.8
Metropolitan	Fr	4-2.88x3.50	51-4250	105	90.9	8.30	IL	IH	Ch	73.0	45.3	44.8	149.5	61.5	54.5	5.20/13	1-SD	W	HS	4	Hy	CS	LS	H	8½	10.6
M.G. Magnette	Fr	4-2.88x3.50	68-5400	138	90.9	8.30	IL	IH	Ch	102.0	51.0	51.0	169.0	63.0	58.0	5.50/15	2-SSh	W	HS	4	Hk	CS	LS	H	5¼	11.2
MGA	Fr	4-2.88x3.50	72-5500	130	90.9	8.30	IL	IH	Ch	94.0	48.0	49.0	156.0	57.0	50.0	5.60/15	2-SSh	W	HS	4	Hk	CS	LS	H	5	12.1
MGA Twin Cam	Fr	4-2.97x3.50	108-6700	163	96.9	9.90	IL	OC	Ch	94.0	47.0	48.0	156.0	58.0	50.0	5.90/15	2-SSh	W	HS	4	Hk	CS	LS	H	6¾	12.1
Morgan Morgan 4/4 Series II	Fr	4-2.50x3.64	36-4400	91	71.6	7.00	IL	L	Ch	96.0	47.0	47.0	152.0	56.0	50.0	5.00/16	1-Do	W	HS	3	Hk	CS	LS	H	6	8.5
Plus 4	Fr	4-3.27x3.62	100-4800	136	121.5	8.50	IL	IH	Ch	96.0	47.0	47.0	152.0	56.0	50.0	5.25/16	2-SSh	W	HS	4	Hk	CS	LS	H	8	12.0

For abbreviations see page 121

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1959... FOREIGN PASSENGER CARS

MAKE AND MODEL	ENGINE: Location in Chassis	Number of Cylinders Bore and Stroke (In.)	Max. Brake Horsepower at Specified R.P.M.	B.M.E.P. at Max. Horsepower (Lb./Sq. In.)	Piston Displacement (Cu. In.)	Compression Ratio (To —1)	Cylinder Arrangement	Valve Location	Camshaft Drive	CHASSIS: Wheelbase (In.)	Tread (In.) Front	Tread (In.) Rear	Overall Dimensions (In.) Length Including Bumpers and Bumper Guards	Overall Dimensions (In.) Width	Overall Dimensions (In.) Height—Road to Roof, No Load	Tires (In.)	Carburetors—No. Used and Type	Cooling Medium	Shifting Method	No. of Forward Speeds	Final Drive Type	Front Suspension Type	Rear Suspension Type	Service Brakes	Cooling System Capacity (Qt.)	Fuel Tank Capacity (Gal.)
GREAT BRITAIN—*continued*																										
Morris....... Minor 1000	Fr	4-2.48x3.00	37-4800	130	57.8	8.30	IL	IH	Ch	86.0	51.0	50.0	148.0	61.0	60.0	5.00/14	1-SSh	W	HS	4	Hk	TB	LS	H	5	7.8
..... Oxford & Cowley	Fr	4-2.88x3.50	55-4400	130	90.9	8.30	IL	IH	Ch	97.0	54.0	53.0	171.0	65.0	63.0	5.60/15	1-SSh	W	HS	4	Hk	TB	LS	H	7	14.5
Peerless GT2	Fr	4-3.27x3.62	100-5000	145	121.5	8.50	IL	IH	Ch	94.5	51.0	51.0	162.0	63.0	50.0	5.50/15	2-SS	W	HS	4	Do	CS	LS	H	8	16.9
Riley................ 1.5	Fr	4-2.88x3.50	68-5400	138	90.9	8.30	IL	IH	Ch	86.0	51.0	50.0	153.0	61.0	60.0	5.00/14	1-SSh	W	HS	4	Hk	TB	LS	H	6½	8.4
.... 2.6	Fr	6-3.13x3.50	101-4500	132	161.1	8.30	IL	IH	Ch	114.0	54.0	54.0	185.0	67.0	61.0	6.70/15	2-SS	W	HA	4	Hk	TB	LS	H	10	15.7
Rolls Royce .. Silver Cloud	Fr	6-3.75x4.50	....	.....	298.0	8.00	IL	IS	G	123.0	58.0	60.0	212.0	74.5	64.3	8.20/15	2-SS	W	Au	4	Hk	CS	LS	H	16¾	21.6
.... Silver Cloud	Fr	6-3.75x4.50	....	.....	298.0	8.00	IL	IS	G	127.0	58.0	60.0	215.8	74.5	64.3	8.20/15	2-SS	W	Au	4	Hk	CS	LS	H	16¾	21.6
.... Silver Wraith	Fr	6-3.75x4.50	....	.....	298.0	8.00	IL	IS	G	133.0	57.9	64.0	(2)	(2)	(2)	7.50/16	2-SS	W	Au	4	Hk	CS	LS	H	18	21.6
Rover.................. 60	Fr	4-3.06x4.13	60-4000	125	122.0	6.90	IL	IS	Ch	111.0	52.0	51.5	178.3	65.6	63.8	6.00/15	1-SD	W	HS	4	Hk	CS	LS	H	8½	11.5
.... 75	Fr	6-2.88x3.50	80-4500	125	136.0	7.20	IL	IS	Ch	111.0	52.0	51.5	178.3	65.6	63.8	6.00/15	1-SD	W	HS	4	Hk	CS	LS	H	10½	11.5
.... 90	Fr	6-2.88x4.13	93-4500	129	161.0	7.50	IL	IS	Ch	111.0	52.0	51.5	178.3	65.6	63.8	6.00/15	1-SD	W	HS	4	Hk	CS	LS	H	10½	11.5
.... 105	Fr	6-2.88x4.13	108-4250	142	161.0	8.50	IL	IS	Ch	111.0	52.0	51.5	178.3	65.6	63.8	6.00/15	2-SD	W	HS	5	Hk	CS	LS	HV	10½	11.5
.... 3 Litre	Fr	6-3.06x4.13	115-4500	136	182.7	8.75	IL	IS	Ch	110.5	55.0	56.0	186.5	70.0	60.3	6.70/15	1-SD	W	HA	4	Hk	TB	LS	HV	11¼	14.0
Singer .. Gazelle Series III	Fr	4-3.11x3.00	60-4500	137	91.2	8.50	IL	IH	Ch	96.0	49.0	48.5	163.5	60.8	59.5	5.00/15	1-SD	W	HS	4	TT	CS	LS	H	6¼	10.0
Standard................ 8	Fr	4-2.28x2.99	33-5000	100	49.0	8.25	IL	IH	Ch	84.0	48.5	48.5	142.0	58.0	59.0	5.20/13	1-SD	W	HS	4	Hk	CS	LS	H	4½	8.4
.... 10	Fr	4-2.48x2.99	37-5000	100	57.8	8.00	IL	IH	Ch	84.0	48.5	48.5	142.0	58.0	59.0	5.20/13	1-SD	W	HS	4	Hk	CS	LS	H	4½	8.4
.... Pennant	Fr	4-2.48x2.99	37-5000	100	57.8	8.00	IL	IH	Ch	84.0	48.5	48.5	147.0	58.0	59.0	5.60/13	1-SD	W	HS	4	Hk	CS	LS	H	4½	8.4
.... Ensign	Fr	4-2.99x3.62	60-4000	115	102.0	8.00	IL	IH	Ch	102.0	51.5	51.5	171.5	67.5	60.0	5.90/15	1-SD	W	HS	4	Hk	CS	LS	H	8½	14.4
Vanguard III Estate Car	Fr	4-3.35x3.62	68-4000	105	127.6	7.50	IL	IH	Ch	102.0	51.0	51.0	170.5	67.5	60.0	5.50/16	1-SD	W	HA	3	Hk	CS	LS	H	8½	14.4
.... Vanguard III	Fr	4-3.35x3.62	68-4000	105	127.6	7.50	IL	IH	Ch	102.0	51.5	51.5	172.0	67.5	60.0	5.90/15	1-SD	W	HA	3	Hk	CS	LS	H	8½	14.4
Sunbeam .... Rapier Series II	Fr	4-3.11x3.00	73-5200	134	91.1	8.50	IL	IH	Ch	96.0	49.0	48.5	162.5	61.0	58.5	5.60/15	2-SD	W	HS	4	TT	CS	LS	H	6¼	10.0
Triumph......... Sedan	Fr	4-2.48x2.99	37-5000	100	57.8	8.00	IL	IH	Ch	84.0	48.5	48.5	142.0	58.0	59.0	5.20/13	1-SD	W	HS	4	Hk	CS	LS	H	4½	8.4
.... Estate Wagon	Fr	4-2.48x2.99	37-5000	100	57.8	8.00	IL	IH	Ch	84.0	48.5	48.5	144.0	58.0	59.0	5.60/13	1-SD	W	HS	4	Hk	CS	LS	H	4½	8.4
.... Sports TR3	Fr	4-3.27x3.62	100-5000	130	121.5	8.50	IL	IH	Ch	88.0	45.0	45.0	151.0	55.5	46.0	5.50/15	2-SD	W	HS	4	Hk	CS	LS	H	8½	14.4
Unicar.................. T	R	2-2.26x2.42	18-5000	74	19.4	7.50	IL	N	N	72.0	48.0	36.0	116.0	58.0	52.0	4.40/12	1-Sd	A	HS	3	Ch	CS	CS	M	N	4.2
Vauxhall...... Victor FD	Fr	4-3.13x3.00	55-4200	113	92.0	7.80	IL	IH	Ch	98.0	50.0	50.0	167.9	62.5	57.6	5.60/13	1-SD	W	HS	3	Hk	CS	LS	H	7¼	9.6
.... Victor FW	Fr	4-3.13x3.00	55-4200	113	92.0	7.80	IL	IH	Ch	98.0	50.0	50.0	167.9	62.5	58.0	5.90/13	1-SD	W	HS	3	Hk	CS	LS	H	7¼	9.6
Wolseley 1500	Fr	4-2.88x3.50	50-4200	123	90.9	8.30	IL	IH	Ch	86.0	51.0	50.0	152.0	61.0	59.8	5.00/14	1-SSh	W	HS	4	Hk	TB	LS	H	6	8.4
.... 15/50	Fr	4-2.88x3.50	55-4400	130	90.9	8.30	IL	IH	Ch	102.0	51.0	51.0	173.0	61.0	60.0	5.60/15	1-SSh	W	HS	4	Hk	CS	LS	H	5¼	11.1
.... 6/90	Fr	6-3.13x3.50	101-4500	126	161.1	8.30	IL	IH	Ch	114.0	54.0	55.0	188.0	67.0	62.0	6.70/15	2-SS	W	HA	4	Hk	TB	LS	H	10	15.7
AUSTRALIA																										
Holden.............. FC	Fr	6-3.00x3.13	72-4400	98	132.5	7.00	IL	IH	G	105.0	54.5	54.5	176.0	66.9	62.9	6.40/13	1-SD	W	HS	3	Hk	CS	LS	H	9½	11.4
AUSTRIA																										
Steyr............... 2000	Fr	4-3.35x3.47	86-4600	120	121.7	7.50	IL	IH	Ch	104.3	52.2	52.1	170.3	65.2	62.6	6.40/14	1-DD	W	HS	5	TT	CS	CS	H	10½	14.5
.... 2300 Sport	Fr	4-3.55x3.47	95-4300	121	136.8	8.00	IL	IH	Ch	104.3	52.4	52.1	170.3	65.2	62.6	6.40/14	1-DD	W	HS	4	TT	CS	CS	H	10½	14.5
CZECHOSLOVAKIA																										
Skoda........... Octavia	Fr	4-2.68x2.95	40-4200	112	66.6	7.00	IL	IH	Ch	94.5	47.6	49.0	159.0	63.0	58.0	5.00/15	1-SD	W	HS	4	Hk	CS	LS	H	6¾	8.0
.... Octavia Super	Fr	4-2.83x2.95	45-4200	112	73.3	7.00	IL	IH	Ch	94.5	47.6	49.0	159.0	63.0	58.0	5.00/15	1-SD	W	HS	4	Hk	CS	LS	H	6¾	8.0
.... Felicia	Fr	4-2.68x2.95	50-5500	107	66.6	8.20	IL	IH	Ch	94.5	47.6	49.0	159.0	63.0	58.0	5.00/15	2-SD	W	HS	4	Hk	CS	LS	H	6¾	8.0
Tatra............... 603	R	8-2.93x2.88	95-5000	112	155.2	6.20	V	OC	Ch	108.3	55.1	55.1	199.4	75.2	61.0	6.70/15	1-Do	A	HS	4	.....	CS	CS	H	N	12.0
FRANCE																										
Bugatti.............. 101	....	8-2.82x3.94	200-5500	145	199.0	6.50	IL	IH	G	130.0	53.2	53.2	212.4	65.0	65.0	6.00/17	1-DD	W	HS	4	SB	.....	.....	H	.....	.....
Citroen.............. 2CV	Fr	2-2.34x2.42	13-4200	95	25.8	7.00	Op	OC	G	94.5	49.6	49.6	149.0	56.3	63.0	8.75/15	1-Do	A	Au	4	.....	CS	CS	H	.....	4.4
.... 1D19P	Fr	6-3.10x3.90	66-4500	97	119.5	7.50	IL	OC	Ch	123.0	59.1	51.2	189.5	70.5	58.0	6.40/15	1-Do	W	HS	4	.....	TB	TB	H	7	16.2
.... DS19	Fr	6-3.10x3.90	75-4500	111	119.5	7.50	IL	OC	Ch	123.0	59.1	51.2	189.5	70.5	58.0	6.40/15	1-Do	W	HS	4	.....	TB	TB	H	7	16.2
Facel-Vega HK500	....	....	360-.....	.....	.....	10.00	V	IH	.....	104.7	55.9	57.0	181.1	70.8	52.0	6.70/15	2-Fb	....	HS	4	Hy	.....	.....	H	.....	.....
.... Excellence	....	....	360-.....	.....	.....	10.00	V	IH	.....	124.8	55.9	57.0	206.7	72.0	54.0	7.10/15	2-Fb	....	HS	4	Hy	.....	.....	H	.....	.....
Panhard........... Dyna	Fr	2-3.32x2.92	42-.....	.....	51.9	.....	Op	IH	G	.....	.....	.....	.....	.....	.....	.....	.....	A	HS	4	.....	.....	LS	.....	.....	.....
Peugeot.............. 403	Fr	4-3.13x2.88	65-4750	110	89.6	7.50	IL	IH	Ch	105.0	52.8	52.0	176.0	66.0	59.3	6.50/15	1-Do	W	HS	4	TT	LS	CS	H	9½	13.3
Renault.......... R-1062	R	4-2.15x3.15	26-4300	114	45.3	7.75	IL	IH	G	82.7	47.9	48.0	143.2	56.3	57.9	5.00/15	1-Do	W	HS	3	SA	CT	CS	H	4¼	7.3
...... R-1090 Dauphine	R	4-2.28x3.15	31-4250	122	51.6	8.00	IL	IH	G	89.5	49.3	48.0	157.5	60.0	56.8	5.00/15	1-Do	W	HS	3	SA	CT	CS	H	4¾	8.5
R-1091 Dauphine Gordini	R	4-2.28x3.15	38-5000	135	51.6	7.80	IL	IH	G	89.5	49.3	48.0	157.5	60.0	56.9	5.50/15	1-Do`	W	HS	4	SA	CT	CS	H	4¾	8.5

For abbreviations see page 121

For Directory of Car Manufacturers listed above, see Table of Contents

FOREIGN PASSENGER CARS—*continued*

MAKE AND MODEL	ENGINE: Location in Chassis	Number of Cylinders Bore and Stroke (In.)	Max. Brake Horsepower at Specified R.P.M.	B.M.E.P. at Max. Horsepower (Lb./Sq. In.)	Piston Displacement (Cu. In.)	Compression Ratio (To—1)	Cylinder Arrangement	Valve Location	Camshaft Drive	CHASSIS: Wheelbase (In.)	TREAD (In.) Front	TREAD (In.) Rear	OVERALL DIMENSIONS (In.) Length Including Bumpers and Bumper Guards	OVERALL DIMENSIONS (In.) Width	OVERALL DIMENSIONS (In.) Height—Road to Roof, No Load	Tires (In.)	Carburetors—No. Used and Type	Cooling Medium	Shifting Method	No. of Forward Speeds	Final Drive Type	Front Suspension Type	Rear Suspension Type	Service Brakes	Cooling System Capacity (Qt.)	Fuel Tank Capacity (Gal.)
FRANCE—*continued*																										
Renault (Contd.)																										
R-1103 Fregate	Fr	4-3.46x3.46	77-4000	122	130.7	7.00	IL	IH	G	110.2	55.1	55.1	185.0	67.7	63.0	6.40/15	1-Do	W	HS	4	Do	CT	CT	H	9½	15.3
R-1104 Transfluide	Fr	4-3.46x3.46	80-4000	128	130.7	7.50	IL	IH	G	110.2	55.1	55.1	185.0	67.7	63.0	6.40/15	1-Do	W	HS	3	Do	CT	CT	H	9½	15.3
Rovin 3CV	Fr	2-2.73x2.34	13-3200	116	27.7		Op			71.0	38.6	38.6	124.0	45.3	49.3	3.50/10	1-	W								4.4
Simca Arende P-60	Fr	4-2.91x2.95	48-4800	99	78.7	6.70	IL	IH	Ch	95.9	49.4	49.2	164.9	61.6	56.1	5.60/14	1-SD	W	HS	4	Hk	CT	LS	H	6¾	11.4
Ariane	Fr	4-2.91x2.95	48-4800	99	78.7	6.70	IL	IH	Ch	106.0	54.0	53.0	177.9	69.1	58.2	6.50/15	1-SD	W	HS	4	Hk	CT	LS	H	6¾	15.9
Vedette	Fr	8-2.60x3.38	84-4800	97	143.4	7.50	V	L	G	105.9	53.9	52.8	187.0	69.6	52.7	6.50/15	1-DD	W	HS	3	Hk	CT	LS	H	18	15.9
Talbot Large	Fr	8-2.57x3.34	95-5000	109	138.5	8.00	V	L	G	98.5	51.3	51.3	165.5	64.6	52.0	6.00/16	2-Do	W	HS	4		LS	LS	H	9¾	17.6
GERMANY																										
BMW 600	R	2-2.91x2.67	23-4000	129	35.7	6.80	Op	IH	G	66.9	47.5	46.2	114.0	56.2	54.0	5.20/10		A	HS	4	BG	CS	CS	H	N	6.0
2, 6	Fr	8-2.91x2.95	110-4800	115	157.0	7.00	V	IH	Ch	111.6	52.3	55.7	186.0	70.0	60.0	6.40/15	1-DD	W	HS	4	TT	TB	TB	H	9½	18.0
2, 6 Luxus	Fr	8-2.91x2.95	115-4800	121	157.0	7.00	V	IH	Ch	111.6	52.3	55.7	186.0	70.0	60.0	6.40/15	1-DD	W	HS	4	TT	TB	TB	H	9½	18.0
3, 2	Fr	8-3.22x2.95	140-4800	120	193.0	7.20	V	IH	Ch	111.6	52.3	55.7	186.0	70.0	60.0	6.40/15	1-DD	W	HS	4	TT	TB	TB	H	9½	18.0
3, 2 Super	Fr	8-3.22x2.95	162-4800	139	193.0	7.30	V	IH	Ch	111.6	52.3	55.7	186.0	70.0	60.0	6.50/15	2-DD	W	HS	4	TT	TB	TB	H	10½	18.0
503	Fr	8-3.22x2.95	162-4800	139	193.0	7.30	V	IH	Ch	111.6	55.0	55.9	187.0	67.0	56.4	6.00/16	2-DD	W	HS	4	TT	TB	TB	H	10½	20.0
507	Fr	8-3.22x2.95	173-5000	142	193.0	7.80	V	IH	Ch	97.5	56.8	56.0	172.4	66.0	50.0	6.00/16	2-DD	W	HS	4	TT	TB	TB	H	10	16.0
Borgward Isabella	Fr	4-2.92x3.30	60-4700	111	91.0	7.00	IL	IH	G	101.5	52.0	53.0	171.0	66.5	53.1	5.90/13	1-SD	W	HS	4	Ch	CS	CS	H	6	10.6
Isabella TS	Fr	4-2.92x3.30	75-5200	125	91.0	8.20	IL	IH	G	101.5	52.0	53.0	171.0	66.5	53.1	5.90/13	1-DD	W	HS	4	Ch	CS	CS	H	6	10.6
Ford Taunus 12M	Fr	4-2.50x3.64	43-4250	107	71.5	6.80	IL	L	G	98.0	48.0	48.0	160.0	62.2	61.0	5.60/13	1-SD	W	HS	3	Hk	CS	LS	H	7½	9.0
Taunus 17M	Fr	4-3.31x3.02	67-4400	113	103.6	7.10	IL	IH	G	102.5	50.0	50.0	172.3	65.7	59.1	5.90/13	1-SD	W	HS	3	Hk	CT	LS	H	8¾	11.9
Goggomobil Regent T300	R	2-	15-5000	67	17.8		IL			70.8			114.2	50.4	51.5	4.40/10		A		4		CS	CS	H	N	....
Regent T400	R	2-2.64x2.21	20-5000	66	23.9	6.00	IL	N	N	70.8			114.2	50.4	51.5	4.40/10	1-SS	A		4		CS	CS	H	N	....
Mayfair TS300	R	2-	15-5000	67	17.8		IL			70.8			119.5	53.9	48.6	4.80/10		A	Pr	4		CS	CS	H	N	....
Mayfair TS400	R	2-2.64x2.21	20-5000	66	23.9	6.00	IL	N	N	70.8	42.0	42.0	119.5	53.9	48.6	4.80/10	1-SS	A	Pr	4		CS	CS	H	N	6.6
Royal T700	Fr	2-	30-4900	113	41.6		Op	IH		78.7			134.8	57.9	54.3	4.80/12		A	HS	4		CS	LS	H	N	....
Goliath																										
1100 & 1100B Sedan	Fr	4-2.91x2.52	48-4250	110	66.7	7.25	Op	IH	G	89.3	50.8	49.2	159.7	64.2	57.1	5.60/13	1-SD	W	HS	4	FW	LS	LS	H	8	10.0
1100 & 1100B Empress	Fr	4-2.91x2.52	61-5000	123	66.7	7.90	Op	IH	G	89.3	50.8	49.2	159.7	64.2	57.1	5.60/13	1-SD	W	HS	4	FW	LS	LS	H	8	10.0
1100 & 1100B Tiger	Fr	4-2.91x2.52	61-5000	123	66.7	7.90	Op	IH	G	89.3	50.8	49.2	161.4	64.2	53.5	5.60/13	1-SD	W	HS	4	FW	LS	LS	H	8	10.0
Isetta 300	R	1-2.83x2.87	16-5200	133	18.0	7.00	S	IH	Ch	59.0	47.3	20.5	92.6	54.3	52.7	4.80/10		A	HS	4	Ch	CS	LS	H	N	3.4
Lloyd Alexander	Fr	2-3.03x2.52	24-4500	91	36.4	6.60	IL	OC	Ch	78.8	41.4	43.4	131.1	55.8	55.1	4.25/15	1-SD	A	HS	4	FW	LS	CS	H	N	6.8
Alexander TS	Fr	2-3.03x2.52	29-5000	107	36.4	7.20	IL	OC	Ch	78.3	41.4	43.4	131.1	55.8	55.1	4.25/15	1-SD	A	HS	4	FW	LS	CS	H	N	6.8
Maico 500	R	2-2.57x2.57	18-4000	64	27.6	7.20	IL	N	N	81.5	47.3	45.5	135.0	57.8	53.3	5.20/12	1-SU	W	HS	4		CS	CS	H	3	6.6
Mercedes-Benz 180	Fr	4-3.32x3.26	74-4700	107	115.8	6.80	IL	OC	Ch	105.0	56.0	57.5	175.5	68.5	61.0	6.40/13	1-SD	W	HS	4	Hy	CS	CS	H	8	12.3
180D	Fr	4-2.92x3.90	46-3500	97	107.8	19.00	IL	IH	G	105.0	56.0	57.5	175.5	68.5	61.0	6.40/13	Inj	W	HS	4	Hy	CS	CS	H	7½	12.3
190	Fr	4-3.32x3.26	84-4800	120	115.8	7.50	IL	OC	Ch	104.5	56.0	58.0	176.5	68.5	61.5	6.40/13	1-DD	W	HS	4	Hy	CS	CS	H	8¼	12.3
190D	Fr	4-3.32x3.26	55-4000	94	115.8	21.00	IL	OC	Ch	105.0	56.0	57.5	175.5	68.5	61.0	6.40/13	Inj	W	HS	4	Hy	CS	CS	H	7½	12.3
190SL	Fr	4-3.32x3.26	120-5700	142	115.8	8.50	IL	OC	Ch	94.5	56.0	58.0	165.5	68.5	52.0	6.40/13	2-DS	W	HS	4	Hy	CS	CS	HV	8¼	14.3
219	Fr	6-3.12x2.84	100-5000	120	134.0	8.70	IL	OC	Ch	108.0	56.0	58.0	183.0	68.5	61.5	6.40/13	1-DD	W	HS	4	Hy	CS	CS	H	10	12.3
220S Saloon	Fr	6-3.12x2.84	120-5200	139	134.0	8.70	IL	OC	Ch	111.0	56.0	58.0	185.5	68.5	61.5	6.70/13	2-DD	W	HS	4	Hy	CS	CS	HV	10	14.0
220S Coupe	Fr	6-3.12x2.84	120-5200	139	134.0	8.70	IL	OC	Ch	106.0	56.0	58.0	185.0	70.5	60.0	6.40/13	1-DD	W	HS	4	Hy	CS	CS	HV	10	14.0
220SE	Fr	6-3.12x2.84	130-5000	154	134.0	8.70	IL	OC	Ch	111.0	56.0	58.0	187.0	68.5	61.5	6.70/13	Inj	W	HS	4	Hy	CS	CS	HV	10	14.0
300 Automatic	Fr	6-3.32x3.43	180-5500	143	182.8	8.50	IL	OC	Ch	124.0	58.0	60.0	204.0	73.0	64.0	7.60/15	Inj	W	Au	4	Hy	CS	CT	HV	18½	15.8
300SL Roadster	Fr	6-3.32x3.43	240-6100	164	182.8	8.55	IL	OC	Ch	94.5	55.0	57.0	180.0	70.5	51.0	6.50/15	Inj	W	HS	4	Hy	CS	CS	HV	17½	22.0
NSU Prinz II	R	2-2.92x2.57	26-4800	62	34.5	6.80	IL	OC	CR	78.0	46.8	46.8	126.0	55.4	53.5		1-Do	A	HS	4	Hk	CS	CS	H	N	6.6
Sportprinz	R	2-2.92x2.57	42-6000	81	34.5	8.50	IL	OC	CR	78.0	46.8	46.8	142.0	56.5	48.6		1-Do	A	HS	4	Hk	CS	CS	H	N	....
Opel Olympia	Fr	4-3.15x2.91	51-4200	106	90.8	6.90	IL	IH	G	100.4	49.6	50.0	174.0	63.6	56.7	5.60/13	1-Do	W	HS	3	Hk	CS	LS	H	8½	10.6
Kapitan	Fr	6-3.15x3.23	95-4300	114	150.9	7.50	IL	IH	G	110.2	54.2	54.0	186.8	70.3	59.1	6.70/13	1-Do	W	HS	3	Hk	CS	LS	H	12½	14.5
Porsche 356A/1600	R	4-3.25x2.91	60-4500	106	96.5	7.50	Op	OC	G	82.7	51.4	50.1	155.8	65.6	51.5	5.60/15	2-DD	A	HS	4	TT	TB	TB	H	N	13.7
356A/1600S	R	4-3.25x2.91	75-5000	121	96.5	8.50	Op	OC	G	82.7	51.4	50.1	155.8	65.6	51.5	5.60/15	2-DD	A	HS	4	TT	TB	TB	H	N	13.7
356A/1600GS	R	4-3.45x2.62	105-6500	147	97.0	9.00	Op	OC	G	82.7	51.4	50.1	155.8	65.6	51.6	5.90/15	2-DD	A	HS	4	TT	TB	TB	H	N	13.7
Volkswagen 11	R	4-3.03x2.52	36-3700	104	72.7	6.60	Op	IH	G	94.5	51.4	49.2	160.6	60.6	59.1	5.60/15	1-SD	A	HS	4	SB	TB	TB	H	N	10.6
14	R	4-3.03x2.52	36-3700	104	72.7	6.60	Op	IH	G	94.5	51.4	49.2	163.0	34.3	52.4	5.60/15	1-SD	A	HS	4	SB	TB	TB	H	N	10.6
22	R	4-3.03x2.52	36-3700	104	72.7	6.60	Op	IH	G	94.5	53.9	53.5	168.9	68.9	76.5	6.40/15	1-SD	A	HS	4	SB	TB	TB	H	N	10.6
HOLLAND																										
DAF 600	Fr	2-3.00x2.50	22-4000	121	36.0	7.00	Op	IH	G	81.0	47.0	47.0	142.0	57.0	54.0	5.20/12	1-SD	A	Au	Vr	TR	LS	CS	H	N	6.3
IRELAND																										
Heinkel T-154	R	1-2.50x2.40	10-5500	105	12.1	6.80		IH	G	69.0	49.5	9.0	100.0	53.8	51.8	4.40/10	1-Sd	A	HS	4	Ch	CS	CS	H	N	3.8

For abbreviations see page 121

For Directory of Car Manufacturers listed above, see Table of Contents

FOREIGN PASSENGER CARS—*concluded*

MAKE AND MODEL	ENGINE: Location in Chassis	Number of Cylinders Bore and Stroke (In.)	Max. Brake Horsepower at Specified R.P.M.	B.M.E.P. at Max. Horsepower (Lb./Sq. In.)	Piston Displacement (Cu. In.)	Compression Ratio (To—1)	Cylinder Arrangement	Valve Location	Camshaft Drive	CHASSIS: Wheelbase (In.)	TREAD (In.) Front	TREAD (In.) Rear	OVERALL DIMENSIONS (In.) Length Including Bumpers and Bumper Guards	OVERALL DIMENSIONS (In.) Width	OVERALL DIMENSIONS (In.) Height—Road to Roof, No Load	Tires (In.)	Carburetors—No. Used and Type	Cooling Medium	Shifting Method	No. of Forward Speeds	Final Drive Type	Front Suspension Type	Rear Suspension Type	Service Brakes	Cooling System Capacity (Qt.)	Fuel Tank Capacity (Gal.)
ITALY																										
Alfa Romeo ..... Giulietta	Fr	4-2.88x2.92	53-5200	103	78.6	.....	IL	OC	Ch	92.8	50.2	49.5	155.7	60.6	54.8	6.00/15	1-SU	W	HS	4	TT	CS	CS	HM	6½	8.8
.... Giulietta T1	Fr	4-2.88x2.92	65-5500	117	78.6	.....	IL	OC	Ch	92.8	50.2	49.5	155.7	60.6	54.8	6.00/15	1-DU	W	HS	4	TT	CS	CS	HM	6½	8.8
...... Giulietta Spider	Fr	4-2.88x2.92	80-6000	134	78.6	.....	IL	OC	Ch	85.8	50.2	49.5	150.0	61.6	52.1	6.00/15	1-DU	W	HS	4	TT	CS	CS	HM	6½	11.7
...... Giulietta Sprint	Fr	4-2.88x2.92	80-6000	134	78.6	.....	IL	IH	Ch	92.8	50.2	49.5	155.0	59.8	51.0	6.00/15	1-DU	W	HS	4	TT	CS	CS	HM	6½	11.7
Giulietta Spider Veloce	Fr	4-2.88x2.92	90-6000	151	78.6	.....	IL	OC	Ch	85.8	50.2	49.5	150.0	61.6	52.1	6.00/15	2-SS	W	HS	4	TT	CS	CS	HM	6½	11.7
Giulietta Sprint Veloce	Fr	4-2.88x2.92	90-6000	151	78.6	.....	IL	IH	Ch	92.8	50.2	49.5	155.0	59.8	51.0	6.00/15	2-SS	W	HS	4	TT	CS	CS	HM	6½	17.6
.... 2000	Fr	4-3.30x3.43	105-5300	128	120.5	8.25	IL	OC	Ch	106.0	54.6	53.4	184.0	66.3	53.4	6.40/15	1-DU	W	HS	5	TT	CS	CS	HM	9¾	....
Ferrari .. 250 Granturismo	Fr	12-2.84x2.29	240-7000	151	180.0	9.20	V	OC	Ch	101.5	52.8	52.6	186.0	67.5	51.9	6.00/16	3-DD	W	HS	4	TT	CT	LS	HM	7½	19.8
..... 410 Superamerica	Fr	12-3.43x2.65	400-6500	161	302.0	9.00	V	OC	Ch	101.5	56.7	56.5	183.3	68.3	53.0	6.50/16	3-DD	W	HS	4	TT	CT	LS	HM	....	22.0
Fiat 500	R	2-2.60x2.76	17-4000	115	29.2	7.00	IL	IH	Ch	72.4	44.1	47.7	116.9	55.0	55.2	4.70/12	1-SD	A	HS	4	.....	LS	CS	HM	N	5.5
.... 600 Sedan	R	4-2.36x2.20	22-4600	97	38.6	7.50	IL	IH	Ch	78.8	45.3	45.7	129.3	54.3	55.3	5.20/12	1-SD	W	HS	4	.....	LS	CS	H	4½	7.1
.... 600 Multipla	R	4-2.36x2.20	22-4600	97	38.6	7.50	IL	IH	Ch	78.8	48.4	45.6	139.2	57.1	62.2	5.20/12	1-SD	W	HS	4	.....	CT	CS	H	9½	7.6
.1100/103D Family Car	Fr	4-2.68x2.95	43-4800	107	66.5	7.00	IL	IH	Ch	92.1	48.6	47.9	149.2	57.4	58.9	5.60/14	1-SD	W	HS	4	Hk	CT	LT	H	4¾	10.0
.... 1100/103D	Fr	4-2.68x2.95	43-4800	107	66.5	7.00	IL	IH	Ch	92.1	48.6	47.9	154.3	57.4	58.7	5.20/14	1-SD	W	HS	4	Hk	CT	LT	H	4¾	10.0
1200 2-Seater Roadster	Fr	4-2.83x2.95	55-5300	110	74.5	8.00	IL	IH	Ch	92.1	48.6	47.9	152.6	57.9	50.4	5.20/14	1-DD	W	HS	4	Hk	CT	LT	H	4¾	10.0
.... 1200 Granluce	Fr	4-2.83x2.95	55-5300	110	74.5	8.00	IL	IH	Ch	99.1	48.6	47.9	154.3	57.4	57.8	5.20/14	1-DD	W	HS	4	Hk	CT	LT	H	4¾	10.0
.... 1400B	Fr	4-3.23x2.60	58-4600	117	85.1	7.50	IL	IH	Ch	104.3	52.2	52.0	170.3	65.2	62.0	5.90/14	1-DD	W	HS	4	Hk	CT	CT	H	9¾	14.5
.... 1900B Granluce	Fr	4-3.23x3.54	80-4000	135	117.0	7.50	IL	IH	Ch	104.3	52.4	52.2	170.2	65.8	60.0	6.40/14	1-DD	W	HS	5	Hk	CT	CT	H	9½	14.5
.... 1900B Sedan	Fr	4-3.23x3.54	80-4000	135	117.0	7.50	IL	IH	Ch	104.3	52.4	52.2	170.3	65.2	62.6	6.40/14	1-DD	W	HS	5	Hk	CT	CT	H	9½	14.5
Lancia ... Flaminia Saloon	Fr	6-3.15x3.21	100-4800	110	150.0	7.80	V	OC	G	113.0	54.0	54.0	191.0	69.0	57.5	6.40/15	1-....	W	HS	4	.....	CS	LS	H	10	15.3
.... Flaminia Sport	Fr	6-3.15x3.21	119-5200	122	150.0	9.00	V	OC	G	99.0	54.0	54.0	169.0	49.5	48.0	6.40/15	1-....	W	HS	4	.....	CS	LS	H	10	15.3
.... Flaminia GT	Fr	6-3.15x3.21	119-5200	122	150.0	9.00	V	OC	G	99.0	54.0	54.0	178.0	64.0	51.0	6.40/15	1-....	W	HS	4	.....	CS	LS	H	10	15.3
.... Flaminia Coupe	Fr	6-3.15x3.21	119-5200	122	150.0	9.00	V	OC	G	108.0	54.0	54.0	183.0	64.0	55.0	6.40/15	1-....	W	HS	4	.....	CS	LS	H	10	15.3
JAPAN																										
Nissan ... 210-S, L210-S	Fr	4-2.68x2.32	37-4600	123	60.2	7.50	IL	IH	Ch	87.4	46.1	46.5	152.8	57.7	59.1	5.00/15	1-SD	W	HS	4	Hk	LS	LS	H	5½	8.6
Prince ... Skyline ALSI-1	Fr	4-2.95x3.31	60-4400	118	90.6	7.50	IL	IH	G	99.8	52.8	54.3	172.0	65.9	60.4	6.40/14	1-DD	W	HS	4	Hk	CS	LS	H	10½	10.6
Toyota ... Toyopet Corona ST10	Fr	4-2.56x2.95	33-4500	124	60.7	7.00	IL	L	G	94.5	46.8	46.4	154.0	57.9	61.2	5.60/14	1-SD	W	HS	3	Hk	CS	LS	H	7	8.0
.. Toyopet Crown RS20	Fr	4-3.03x3.07	62-4500	154	88.5	7.50	IL	IH	G	99.6	52.2	53.9	171.9	66.8	61.0	6.40/15	1-DD	W	HS	3	Hk	CS	LS	H	8½	12.4
Toyopet Crown Custom RS22L	Fr	4-3.03x3.07	65-4500	162	88.5	8.00	IL	IH	G	99.6	52.2	53.9	171.9	66.8	60.2	6.40/13	1-DD	W	HS	3	Hk	CS	LS	H	8¾	12.4
SPAIN																										
S. E. A. T. 600	R	4-.........	19-4600	85	38.7	7.00	IL	IH	Ch	78.5	45.0	45.4	127.0	54.5	55.5	5.20/12	1-Do	W	HS	4	.....	LS	CS	H	4½	7.1
.... 1400	Fr	4-3.21x2.98	44-4400	93	85.1	7.00	IL	IH	Ch	104.3	52.2	52.0	169.5	....	62.0	5.90/14	1-DD	W	HS	4	TT	CS	CS	H	9¾	14.5
SWEDEN																										
SAAB 93B	Fr	3-2.59x2.87	38-5000	86	46.0	7.30	IL	....	....	98.0	48.0	48.0	158.0	62.0	58.0	5.00/15	1-Do	W	HS	3	.....	CS	CS	H	4¾	9.5
Volvo P44508	Fr	4-3.13x3.15	85-5500	125	97.6	8.20	IL	IH	G	102.5	51.0	51.8	173.0	63.0	66.0	6.40/15	2-Sd	W	HS	3	Hk	CS	LS	H	8	9.5
.... P54408	Fr	4-3.13x3.15	85-5500	125	97.6	8.20	IL	IH	G	102.5	51.0	51.8	177.0	62.0	61.5	5.90/15	2-Sd	W	HS	4	Hk	CS	CS	H	8	9.5

ABBREVIATIONS

1—Front only; rear, 5.00/15.
2—Varies with special coachwork built to customers order.
A—Air.
Au—Automatic.
BG—Bevel gears.
Ch—Chain.
CR—Connecting rod.
CS—Coil springs.
CT—Coil springs and torsion bars.
DD—Dual throat, downdraft.
De—De Dion.
Do—Downdraft.
DS—Dual throat, sidedraft.
DU—Dual throat, updraft.
Fb—Four barrel.
Fr—Front.
FW—Front wheel drive.
G—Gear.
H—Hydraulic.
HA—Hand shift or automatic.
Hk—Hotchkiss.
HM—Hydraulic and mechanical.
Ho—Horizontal.
HP—Hydro-pneumatic.
HS—Hand shift.
HV—Hydraulic, vacuum assisted.
Hy—Hypoid.
IH—In head.
IL—In line.
Inj—Injectors.
IS—In head and side.
L—"L" head, valves at side.
LS—Leaf springs.
LT—Leaf springs and torsion bars.
M—Mechanical.
N—None.
OC—Overhead camshaft.
Op—Opposed.
Pr—Pre-selective.
R—Rear.
S—Single cylinder.
SA—Split axle.
SB—Spiral bevel.
Sd—Side draft.
SD—Single throat, downdraft.
SH—Semi-floating, hypoid.
SS—Single throat, sidedraft.
SSh—Single throat, semi-horizontal.
St—Single throat.
SU—Single throat, updraft.
TB—Torsion bars.
TO—Twin overhead camshaft.
TR—Torque rods.
TT—Torque tube.
V—"V" type engine.
Vr—Variable.
W—Water.

For Directory of Car Manufacturers listed above, see Table of Contents

TRUCKS ... 1959

A complete table of Heavy-Duty Trucks will be found in the Construction and Off-Highway Equipment Section of this issue. **See Pages 252-255.**

KEY TO DEFINITIONS

MAKE AND MODEL

Only Domestic Truck Models are listed.

OPTIONAL UNITS

For the express purpose of best fitting the truck to the individual job most of the models listed can be provided with optional engines, transmissions, axles, etc., and these models when so equipped are considered standard stock models.

CHASSIS LIST PRICE

The chassis list price applies to the minimum standard wheelbase with standard tires and standard equipment. All prices are F.O.B. factory. Chassis list price does not include the price of the Cab unless otherwise noted.

RECOMMENDED GROSS VEHICLE WEIGHT FOR NORMAL SERVICE

The Gross Weights published herewith are those supplied by manufacturers as their Recommended Gross Vehicle Weights for Normal Operating Conditions, and are based upon the Maximum Authorized Tire Size listed. In actual practice the manufacturer may either increase or decrease the gross vehicle weight rating when either favorable or unfavorable operating conditions are involved. Since the proper performance of a motor truck depends upon many factors, including grades, road conditions, etc., the gross weights that a manufacturer is prepared to recommend will vary with particular conditions, and the manufacturer's own standard of safety factors. Specific recommendations, therefore, should be obtained from the manufacturer's representative.

CHASSIS WEIGHT

The chassis weight listed includes the weight of the minimum standard wheelbase chassis, with cowl, with standard tires, with standard equipment, with crankcase and cooling system full, and 5 gallons of fuel in the tank. It does not include the weight of the Cab. This applies to C.O.E. as well as conventional chassis types. Exceptions are noted.

STANDARD TIRE SIZE

The standard tire size listed is that which is included in the Chassis List Price.

MAXIMUM AUTHORIZED TIRE SIZE

The tire size listed in this column is the maximum size recommended by the manufacturer of the chassis for the Gross Vehicle Weight for Normal Operating Conditions. It is furnished at extra cost, if it differs from the standard size. Dual rears are understood; exceptions noted.

MINIMUM STANDARD WHEELBASE

The minimum standard wheelbase is the so-called standard wheelbase on which the Chassis List Price is based.

MAXIMUM STANDARD WHEELBASE

The maximum standard wheelbase is the extreme end of the standard range of wheelbases offered by the chassis maker.

MAXIMUM BRAKE HP.

Maximum Brake Horsepower at Given R.P.M. is actual dynamometer reading without accessories.

GEAR RATIO RANGE

Gear Ratio Range in High—Ratios within the range given are available at no extra cost. Exceptions are noted.

TRACTORS

Unless given the designation (N)—meaning not available as a tractor—all standard models may be assumed to be available as tractors. Exclusively Tractor models are designated (T).

KEY TO ABBREVIATIONS

MAKES—ALL

- **All**—Allison Div., General Motors Corp.
- **B**—Bendix.
- **BL**—Brown-Lipe.
- **Bu or Bud**—Buda.
- **BW**—Bendix-Westinghouse.
- **C**—Chevrolet.
- **Cl or Cla**—Clark.
- **Con**—Continental.
- **Cu or Cum**—Cummins-Diesel.
- **Deu**—Deutz Air Cooled Diesel engine.
- **Eat**—Eaton.
- **F**—Ford.
- **Fu**—Fuller.
- **G-H**—Goodyear-Hawley type.
- **GMC**—General Motors Corp.
- **H**—Hotchkiss.
- **Her**—Hercules.
- **HS**—Hall-Scott.
- **Int.**—International Harvester.
- **L**—Lockheed.
- **LeR**—LeRoi.
- **LH**—Lockheed front, Wagner "hi-Tork" rear.
- **LT**—Lockheed type front Timken rear.
- **LW**—Lockheed front, Wisconsin rear.
- **M**—Midland.
- **N.P.**—New Process.
- **O or Ow**—Own.
- **Op or Opt.**—Optional.
- **Shu**—Shuler.
- **Spi**—Spicer.
- **T or Tim**—Timken-Detroit Axle Co.
- **Tw**—Timken-Detroit—Westinghouse.
- **TW**—Timken-Detroit—Wisconsin.
- **Var**—Variable.
- **WG**—Warner Gear.
- **Wau**—Waukesha.
- **W or Wis**—Wisconsin.
- **W-B**—Wagner or Bendix.
- **WE**—Wagner Electric.
- **Wg**—Wagner "hi-Tork."
- **Ws**—Westinghouse.
- **WW**—Westinghouse or Wagner.

REAR AXLE

Final Drive and Type

- **B**—Bevel.
- **CD**—Chain Drive.
- **F**—Full-floating.
- **H or Hy**—Hypoid.
- **d**—Dual range axle.
- **2**—Double Reduction.
- **S**—Spiral bevel.
- **W**—Worm.
- **¾**—Three Quarters Floating.
- **½**—Semi-Floating.
- **T**—Torque Tube.
- **FT**—Full-floating, tandem drive.
- **P**—Planetary.

GEAR RATIOS

- (**)—Only one ratio.

Drive and Torque

- **H**—Hotchkiss (springs)
- **R**—Radius Rods.
- **L**—Parallel Torque Rods.
- **T**—Torque Arm.

GOVERNOR STANDARD

- **Y**—Yes.
- **N**—No.

KEY TO REFERENCES

- **c.f.**—Cab Forward design.
- **c.o.e.**—Cab-Over-Engine design.
- **l.c.f.**—Low cab forward design.
- **(D)**—Diesel-engine equipped.
- **(T)**—Designed for tractor use only.
- **(C)**—Ford or Chevrolet Models.
- **(R)**—Remanufactured Fords.
- ▲—Denotes "Includes Cab" when used with weights or prices.

CHEVROLET

- †—283 V-8 Trademaster engine available.
- ††—283 V-8 Taskmaster engine available.
- ▲—283 V-8 Super Taskmaster 4 barrel carburetor engine available.
- ¶—Overdrive optional.
- ▸—Powerglide available.
- §—Heavy duty 3 speed transmission available.
- ¢—4 speed transmission available.
- ♦—Hydramatic available.
- ♦♦—5 speed New Process transmission available.
- ▲▲—Powermatic available.
- ●—4.11 with overdrive; 3.36 with Powerglide transmissions.
- ‡—3.70 available.
- □□—Two speed rear axle available.
- ♯—7.17 available.
- ●●—348 V-8 Workmaster Special engine available.
- ♦♦♦—5 speed close ratio Spicer available.
- ♦♦—Clark 5 speed available.
- ‡—3.92 ratio Positraction available.

COLEMAN

- *—11.00/22 also available.
- ■—Fu5A65 or Spicer 6352 also available.
- †—Cum HRB600 also available with horsepower of 165-1800.

DIVCO

- *—Front only; rear, 7.50/168.
- †—Front only; rear, 7.50/208.
- ▲—Front only; rear, 8.25/168.
- ■—Front only; rear, 7.50/20D.

DUPLEX

- ‡—Torque Divider, Timken T70-2 speed.

FABCO

- *—With 2-speed transfer case.
- **—With 3-speed auxiliary and 2-speed transfer case.
- **RC**—Chevrolet axle remanufactured.
- **RF**—Ford axle remanufactured.

FEDERAL

- *—Also available with tandem rear axle.

FORD

- *—Other options available.

FWD

- *—Models available with tilt cabs.

KENWORTH

- ♦♦—Timken TK-500 PA Trailing Axle.
- ♦—Both C.O.E. and cab beside engine optional.
- ▲▲—And 8031.

MARMON-HERRINGTON

- *—Three-speed trans. opt.

OSHKOSH

- †—14.00/20 front.

REO

- ♠—Model OA-145 and 331-OA LPG engines can be furnished.
- ♦—Two speed axle available.
- ‡—Model 255-OA-LPG or OA-130 engine can be furnished.
- ■—OH-160 LPG or OH-185 engine can be furnished.
- ▲—Includes cab, fuel, oil, water.
- *—Cummins HRF8, NH195, NH220, NTO engines can be furnished.
- ▼—Model OV-235 or OV-220 LPG engine can be furnished.
- †—OH-170, 330 OA-LPG or OH-160-LPG or OH-185 engine can be furnished.
- △—OA-145 or 331-OA-LPG, OH-160-LPG or OH-185 engine can be furnished.
- ●—Rear only; front, 11.00/20.

STUDEBAKER

- ●—Two speed 5.93-8.10 or 6.48-8.86 optional.
- ▲—Two speed 6.16-8.48 or 6.61-9.09 optional.

TRUCKSTELL

- ♦♦—With 3 speed power divider.
- ♠—Weight with cab and maximum tires.

WARD LA FRANCE

- ‡—Available with optional rear axles.
- ▲▲—Available with 11.00/22 or 12.00/20 tires for G.V.W. of 60,000 lbs and optional front and rear axles.
- ♠♠—Auxiliary transmission, Fuller 3A65, 3B65, 3A92 and 3B92.

WILLYS

- *—Overdrive optional.

1959 TRUCK SPECIFICATIONS

MAKE AND MODEL	WHEELBASE: Minimum Standard	WHEELBASE: Maximum Standard	Gross Vehicle Weight for Normal Service	Chassis Weight (See definition)	TIRE SIZES (D-dual rear, S-single rear): Standard Front and Rear	TIRE SIZES: Maximum Authorized Tire Size (Duals unless noted)	ENGINE DETAILS: Make and Model	No. of Cylinders, Bore and Stroke	Displacement	Comp. Ratio	Torque lb. ft.	Max. Brake H.P. at R.P.M. Given	TRANSMISSION: Make and Model	Forward Speeds	REAR AXLE: Make and Model	Gear and Type	Drive and Torque	Gear Ratio Range in High
Chevrolet G59	119		4900	3750	8.00/14S	8.50/14S	O-Hi. Thrift.	6-3 9/16x3 15/16	236	8.3	217	135-4000	Own ¶♪	3	Own	H½		• 3.55
H59	119		4900	3750	8.00/14S	8.50/14S	O-Turbo Fire	8-3 7/8x300	283	8.0	275	185-4600	Own ¶♪	3	Own	H½		• 3.55
3A59	114		5000	3055	6.70/15S	7/17.5S	O-Th. Mas.†	6-3 9/16x3 15/16	236	8.3	217	135-4000	Own§♦¢	3	Own	H½	H	‡‡-3.90
3B59	123 1/4		5000	3130	6.70/15S	7/17.5S	O-Th. Mas.†	6-3 9/16x3 15/16	236	8.3	217	135-4000	Own§♦¢	3	Own	H½	H	‡‡-3.90
(c.f.) 3C59	104		10000	2815	7/17.5S	8/19.5	O-Th. Mas. Sp.	6-3 9/16x3 15/16	236	8.3	217	135-4000	Own§♦¢	3	Own	HF	H	**-5.14
(c.f.) 3D59	125		10000	2925	7/17.5S	8/19.5	O-Th. Mas. Sp.	6-3 9/16x3 15/16	236	8.3	217	135-4000	Own§♦¢	3	Own	HF	H	**-5.14
(c.f.) 3F59	137		10000	2955	7/17.5S	8/19.5	O-Th. Mas. Sp.	6-3 9/16x3 15/16	236	8.3	217	135-4000	Own§♦¢	3	Own	HF	H	**-5.14
3E59	123 1/4		6900	3455	7/17.5S	7/17.5	O-Th. Mas.†	6-3 9/16x3 15/16	236	8.3	217	135-4000	Own§♦¢	3	Own	HF	H	**-4.57
3G59	135		9600	3690	8/17.5S	8/19.5	O-Th. Mas.†	6-3 9/16x3 15/16	236	8.3	217	135-4000	Own§♦	4	Own	HF	H	**-5.14
4A59	132 1/2		14000	4465	7/22.5D	8/22.5	O-Th. Mas.†	6-3 9/16x3 15/16	236	8.3	217	135-4000	Own♦	4	Own	HF	H	□□-6.17
4B59	156 1/2		14000	4610	7/22.5D	8/22.5	O-Th. Mas.†	6-3 9/16x3 15/16	236	8.3	217	135-4000	Own♦	4	Own	HF	H	□□-6.17
(c.f.) 5D59	112 5/8		15000	5145	8/22.5D	9/22.5	O-Task. Mas.Δ	8-3 7/8x3	283	8.0	270	135-4000	Own++ΔΔ	4	Own	HF	H	#□□-7.20
(l.c.f.) 5L59	124 5/8		15000	5195	8/22.5D	9/22.5	O-Task. Mas.Δ	8-3 7/8x3	283	8.0	270	160-4200	Own++ΔΔ	4	Own	HF	H	#□□-7.20
(l.c.f.) 5E59	136 5/8		15000	5240	8/22.5D	9/22.5	O-Task. Mas.Δ	8-3 7/8x3	283	8.0	270	160-4200	Own++ΔΔ	4	Own	HF	H	#□□-7.20
(l.c.f.) 5F59	160 5/8		15000	5325	8/22.5D	9/22.5	O-Task. Mas.Δ	8-3 7/8x3	283	8.0	270	160-4200	Own++ΔΔ	4	Own	HF	H	#□□-7.20
6F59	132 1/2		15000	5000	8/22.5D	9/22.5	O-Job. Mas.††Δ	6-3 3/4x3 15/16	261	8.0	235	150-4000	Own++ΔΔ	4	Own	HF	H	#□□-7.20
6R59	144 1/2		15000	5050	8/22.5D	9/22.5	O-Job. Mas.††Δ	6-3 3/4x3 15/16	261	8.0	235	150-4000	Own++ΔΔ	4	Own	HF	H	#□□-7.20
6G59	156 1/2		15000	5125	8/22.5D	9/22.5	O-Job. Mas.††Δ	6-3 3/4x3 15/16	261	8.0	235	150-4000	Own++ΔΔ	4	Own	HF	H	#□□-7.20
6H59	174 1/2		15000	5220	8/22.5D	9/22.5	O-Job. Mas.††Δ	6-3 3/4x3 15/16	261	8.0	235	150-4000	Own++ΔΔ	4	Own	HF	H	#□□-7.20
6T59	196 1/2		15000	5395	8/22.5D	9/22.5	O-Job. Mas.††Δ	6-3 3/4x3 15/16	261	8.0	235	150-4000	Own++ΔΔ	4	Own	HF	H	#□□-7.20
(l.c.f.) 5A59	112 5/8		19000	5145	8/22.5D	9/22.5	O-Task. Mas.Δ	8-3 7/8x3	283	8.0	270	160-4200	Own++ΔΔ	4	Own	HF	H	#□□-7.20
(l.c.f.) 5K59	124 5/8		19000	5195	8/22.5D	9/22.5	O-Task. Mas.Δ	8-3 7/8x3	283	8.0	270	160-4200	Own++ΔΔ	4	Own	HF	H	#□□-7.20
(l.c.f.) 5B59	136 5/8		19000	5240	8/22.5D	9/22.5	O-Task. Mas.Δ	8-3 7/8x3	283	8.0	270	160-4200	Own++ΔΔ	4	Own	HF	H	#□□-7.20
(l.c.f.) 5C59	160 5/8		19000	5325	8/22.5D	9/22.5	O-Task. Mas.Δ	8-3 7/8x3	283	8.0	270	160-4200	Own++ΔΔ	4	Own	HF	H	#□□-7.20
6A59	132 1/2		19000	5000	8/22.5D	9/22.5	O-Job. Mas.††Δ	6-3 3/4x3 15/16	261	8.0	235	150-4000	Own++ΔΔ	4	Own	HF	H	#□□-7.20
6P59	144 1/2		19000	5050	8/22.5D	9/22.5	O-Job. Mas.††Δ	6-3 3/4x3 15/16	261	8.0	235	150-4000	Own++ΔΔ	4	Own	HF	H	#□□-7.20
6B59	156 1/2		19000	5125	8/22.5D	9/22.5	O-Job. Mas.††Δ	6-3 3/4x3 15/16	261	8.0	235	150-4000	Own++ΔΔ	4	Own	HF	H	#□□-7.20
6C59	174 1/2		19000	5220	8/22.5D	9/22.5	O-Job. Mas.††Δ	6-3 3/4x3 15/16	261	8.0	235	150-4000	Own++ΔΔ	4	Own	HF	H	#□□-7.20
6V59	196 1/2		19000	5395	8/22.5D	9/22.5	O-Job. Mas.††Δ	6-3 3/4x3 15/16	261	8.0	235	150-4000	Own++ΔΔ	4	Own	HF	H	#□□-7.20
(l.c.f.) 5G59	112 5/8		21000	5225	8/22.5D	9/22.5	O-Task. Mas.Δ	8-3 7/8x3	283	8.0	270	160-4200	Own++ΔΔ	4	Own	HF	H	#□□-7.20
(l.c.f.) 5M59	124 5/8		21000	5275	8/22.5D	9/22.5	O-Task. Mas.Δ	8-3 7/8x3	283	8.0	270	160-4200	Own++ΔΔ	4	Own	HF	H	#□□-7.20
(l.c.f.) 5H59	136 5/8		21000	5310	8/22.5D	9/22.5	O-Task. Mas.Δ	8-3 7/8x3	283	8.0	270	160-4200	Own++ΔΔ	4	Own	HF	H	#□□-7.20
(l.c.f.) 5J59	160 5/8		21000	5405	8/22.5D	9/22.5	O-Task. Mas.Δ	8-3 7/8x3	283	8.0	270	160-4200	Own++ΔΔ	4	Own	HF	H	#□□-7.20
6L59	132 1/2		21000	5085	8/22.5D	9/22.5	O-Task. Mas.Δ	8-3 7/8x3	283	8.0	270	160-4200	Own++ΔΔ	4	Own	HF	H	#□□-7.20
6S59	144 1/2		21000	5135	8/22.5D	9/22.5	O-Task. Mas.Δ	8-3 7/8x3	283	8.0	270	160-4200	Own++ΔΔ	4	Own	HF	H	#□□-7.20
6M59	156 1/2		21000	5205	8/22.5D	9/22.5	O-Task. Mas.Δ	8-3 7/8x3	283	8.0	270	160-4200	Own++ΔΔ	4	Own	HF	H	#□□-7.20
6N59	174 1/2		21000	5305	8/22.5D	9/22.5	O-Task. Mas.Δ	8-3 7/8x3	283	8.0	270	160-4200	Own++ΔΔ	4	Own	HF	H	#□□-7.20
6U59	196 1/2		21000	5480	8/22.5D	9/22.5	O-Task. Mas.Δ	8-3 7/8x3	283	8.0	270	160-4200	Own++ΔΔ	4	Own	HF	H	#□□-7.20
(c.f.) 6J59	129 5/8		18000	4250	8/22.5D	9/22.5	O-Job. Mas.††Δ	6-3 3/4x3 15/16	261	8.0	235	160-4200	Own	4	Own	HF	H	**-7.20
(c.f.) 6K59	153 5/8		18000	4320	8/22.5D	9/22.5	O-Job. Mas.††Δ	6-3 3/4x3 15/16	261	8.0	235	160-4200	Own	4	Own	HF	H	**-7.20
(Sc. Bus Ch.) 4C59	156 1/2		13000	4335	7/22.5D	8/22.5	O-Th. Mas.†	6-3 9/16x3 15/16	236	8.3	217	135-4000	Own	4	Own	HF	H	□□-6.17
(Sc. Bus Ch.) 6D59	196 1/2		18000	5115	8/22.5D	9/22.5	O-Job. Mas.††Δ	6-3 3/4x3 15/16	261	8.0	235	150-4000	Own++ΔΔ	4	Own	HF	H	□□-7.20
(Sc. Bus Ch.) 6E59	222 1/2		18000	5130	8/22.5D	9/22.5	O-Job. Mas.††Δ	6-3 3/4x3 15/16	261	8.0	235	150-4000	Own++ΔΔ	4	Own	HF	H	□□-7.20
(Sc. Bus Ch.) 8F59	240		20000	5755	8/22.5D	10/22.5	O-Sup. Tskmas.	8-3 3/4x3 15/16	283	8.0	275	175-4400	Own++ΔΔ	4	Own	HF	H	#-7.20
(Sc. Bus Ch.) 10F59	240		22000	6100	9/22.5D	10/22.5	O-Ld. Mas.	8-4x3	322	7.7	310	195-4000	NPΔΔ	5	Own	HF	H	#-7.20
(l.c.f.) 7A59	112 5/8		22000	5645	8/22.5D	10/22.5	O-Sup. Tsk.••	8-3 7/8x3	283	8.0	275	175-4400	Own++♦♦ΔΔ	4	Own	HF	H	#□□-7.20
(l.c.f.) 7B59	124 5/8		22000	5680	8/22.5D	10/22.5	O-Sup. Tsk.••	8-3 7/8x3	283	8.0	275	175-4400	Own++♦♦ΔΔ	4	Own	HF	H	#□□-7.20
(l.c.f.) 7C59	172 5/8		22000	6050	8/22.5D	10/22.5	O-Sup. Tsk.••	8-3 7/8x3	283	8.0	275	175-4400	Own++♦♦ΔΔ	4	Own	HF	H	#□□-7.20
8A59	132 1/2		22000	5545	8/22.5D	10/22.5	O-Sup. Tsk.••	8-3 7/8x3	283	8.0	275	175-4400	Own++♦♦ΔΔ	4	Own	HF	H	#□□-7.20
8B59	144 1/2		22000	5665	8/22.5D	10/22.5	O-Sup. Tsk.••	8-3 7/8x3	283	8.0	275	175-4400	Own++♦♦ΔΔ	4	Own	HF	H	#□□-7.20
8C59	156 1/2		22000	5680	8/22.5D	10/22.5	O-Sup. Tsk.••	8-3 7/8x3	283	8.0	275	175-4400	Own++♦♦ΔΔ	4	Own	HF	H	#□□-7.20
8D59	174 1/2		22000	5865	8/22.5D	10/22.5	O-Sup. Tsk.••	8-3 7/8x3	283	8.0	275	175-4400	Own++♦♦ΔΔ	4	Own	HF	H	#□□-7.20
8E59	192 1/2		22000	5980	8/22.5D	10/22.5	O-Sup. Tsk.••	8-3 7/8x3	283	8.0	275	175-4400	Own++♦♦ΔΔ	4	Own	HF	H	#□□-7.20
(l.c.f.) 9A59	112 5/8		25000	6355	9/22.5D	11/22.5	O-Work. Mas.	8-4 1/8x3 1/4	348	7.8	335	230-4400	Spi.+++ΔΔ	5	Eaton	SBF	H	#□□ 7.67
(l.c.f.) 9B59	124 5/8		25000	6540	9/22.5D	11/22.5	O-Work. Mas.	8-4 1/8x3 1/4	348	7.8	335	230-4400	Spi.+++ΔΔ	5	Eaton	SBF	H	#□□ 7.67
(l.c.f.) 9C59	172 5/8		25000	6740	9/22.5D	11/22.5	O-Work. Mas.	8-4 1/8x3 1/4	348	7.8	335	230-4400	Spi.+++ΔΔ	5	Eaton	SBF	H	#□□ 7.67
10A59	132 1/2		25000	6355	9/22.5D	11/22.5	O-Work. Mas.	8-4 1/8x3 1/4	348	7.8	335	230-4400	Spi.+++ΔΔ	5	Eaton	SBF	H	#□□ 7.67
10B59	144 1/2		25000	6435	9/22.5D	11/22.5	O-Work. Mas.	8-4 1/8x3 1/4	348	7.8	335	230-4400	Spi.+++ΔΔ	5	Eaton	SBF	H	#□□ 7.67
10C59	156 1/2		25000	6515	9/22.5D	11/22.5	O-Work. Mas.	8-4 1/8x3 1/4	348	7.8	335	230-4400	Spi.+++ΔΔ	5	Eaton	SBF	H	#□□ 7.67
10D59	174 1/2		25000	6630	9/22.5D	11/22.5	O-Work. Mas.	8-4 1/8x3 1/4	348	7.8	335	230-4400	Spi.+++ΔΔ	5	Eaton	SBF	H	#□□ 7.67
10E59	192 1/2		25000	6990	9/22.5D	11/22.5	O-Work. Mas.	8-4 1/8x3 1/4	348	7.8	335	230-4400	Spi.+++ΔΔ	5	Eaton	SBF	H	#□□ 7.67
(Tan.) 8C59	156 1/2		28000	8325	8/22.5D	9/22.5	O-Sup. Tsk.••	8-3 7/8x3	283	8.0	275	175-4400	Own++♦♦ΔΔ	4	Own	HF	H	**-7.20
(Tan.) 8D59	174 1/2		28000	8510	8/22.5D	9/22.5	O-Sup. Tsk.••	8-3 7/8x3	283	8.0	275	175-4000	Own++♦♦ΔΔ	4	Own	HF	H	**-7.20
(Tan.) 8E59	192 1/2		28000	8665	8/22.5D	9/22.5	O-Sup. Tsk.••	8-3 7/8x3	283	8.0	275	175-4400	Own++♦♦ΔΔ	4	Own	HF	H	**-7.20
(Tan.) 10C59	156 1/2		36000	8805	8/22.5D	10/22.5	O-Work. Mas.	8-4 1/8x3 1/4	348	7.8	335	230-4400	Spi.ΔΔ	5	Own	HF	H	**-7.20
(Tan.) 10D59	174 1/2		36000	8925	8/22.5D	10/22.5	O-Work. Mas.	8-4 1/8x3 1/4	348	7.8	335	230-4400	Spi.ΔΔ	5	Own	HF	H	**-7.20
(Tan.) 10E59	192 1/2		36000	9010	8/22.5D	10/22.5	O-Work. Mas.	8-4 1/8x3 1/4	348	7.8	335	230-4400	Spi.ΔΔ	5	Own	HF	H	**-7.20
Divco 11	100 3/4		7500	2925	7.00/16S*		Con F4162	4-3 7/16x4 3/8	162	6.1	123	47-2800	WG T9		Int L150	H		5.57-6.16
114	100 3/4		7500	2930	7.00/16S*		Con F4162S	4-3 7/16x4 3/8	162	6.2	123	55-2900	WG T9		Int L150	H		5.57-6.16
12	100 3/4		6000	2865	7.00/16S		Con F4162	4-3 7/16x4 3/8	162	6.1	123	47-2800	WG T87		Int L150	H		5.57-6.16
124	100 3/4		6000	2880	7.00/16S		Con F4162S	4-3 7/16x4 3/8	162	6.2	123	55-2900	WG T87		Int L150	H		5.57-6.16
13	100 3/4		7300	2940	7.00/16S*		Con F4162	4-3 7/16x4 3/8	162	6.1	123	47-2800	WG T9		Int L150	H		5.57-6.16
134	100 3/4		7300	2950	7.00/16S*		Con F4162S	4-3 7/16x4 3/8	162	6.2	123	55-2900	WG T9		Int L150	H		5.57-6.16
15	100 3/4		7600	2995	7.00/16S*		Her QXD3	6-3 7/16x4 1/8	230	6.6	173	75-2800	WG T9		Int L150	H		5.57-6.16
154	100 3/4		7600	2998	7.00/16S*		Her QXD3	6-3 7/16x4 1/8	230	6.6	173	75-2800	WG T9		Int L150	H		5.57-6.16
214	127 1/2		12000	3662	6.50/20D		Her QXD3	6-3 7/16x4 1/8	230	6.6	173	75-2800	WG T9		Tim	S		5.14-6.6
224	127 1/2		8000	3200	7.00/16S*		Her QXD3	6-3 7/16x4 1/8	230	6.6	173	75-2800	WG T87		Tim	S		5.14-6.6
244	127 1/2		7500	3127	7.00/16S*		Con F4162S	4-3 7/16x4 3/8	162	6.2	123	55-2900	WG T87		Tim	S		5.14-6.6
334	115		10800	3315	6.50/20S†		Her QXD3	6-3 7/16x4 1/8	230	6.6	173	75-2800	WG T9		Tim	S		5.14-6.6
344	115		7500	3175	7.00/16S*		Her QXD3	6-3 7/16x4 1/8	230			75-2800	WG T87		Int L150	H		5.57-6.16
364	115		6500	3112	7.00/16S		Con F4162S	4-3 7/16x4 3/8	162	6.2	123	55-2900	WG T87		Int L150	H		5.57-6.16
364HD	115		9500	3143	7.50/16S▲		Con F4162S	4-3 7/16x4 3/8	162	6.2	123	55-2900	WG T87		Int L150	H		5.57-6.16
374	115		9500	3232	7.50/16S▲		Her QXD3	6-3 7/16x4 1/8	230	6.6	173	75-2800	WG T9		Tim	S		5.14-6.60
42	130		7000	3370	7.50/16S		Own Super 6	6-3 1/2x4 3/8	253	7.5	220	102-3400	WG T98		Int L150	H		5.57-6.16
52	117 1/2		7000	3281	7.50/16S		Own Super 6	6-3 1/2x4 3/8	253	7.5	220	102-3400	WG T98		Int L150	H		5.57-6.16
41	130		16500	4307	7.00/20■		Own Super 6	6-3 1/2x4 3/8	253	7.5	220	102-3400	WG T98		Int L160	H		6.60-7.17
51	117 1/2		16500	4277	7.00/20■		Own Super 6	6-3 1/2x4 3/8	253	7.5	220	102-3400	WG T98		Int L160	H		6.60-7.17
Dodge M6-D100	108	116	5100		6.70/15S	6.50/16S	Own	6-3 1/4x4 5/8	230	7.9	202	120-3600	Own PC	3	Own D100	Hy	H	4.1 -4.89
M8-D100	108	116	5100		6.70/15S	6.50/16S	Own	8-3.91x3.31	318	8.2	290	205-4400	Own PC	3	Own D100	Hy	H	3.54-4.89

For references and abbreviations see page 122

For Directory of the Truck Manufacturers listed above, see Table of Contents

1959 TRUCK SPECIFICATIONS—continued

MAKE AND MODEL	Wheelbase: Minimum Standard	Wheelbase: Maximum Standard	Gross Vehicle Weight for Normal Service	Chassis Weight See definition	Tire Sizes (D-dual rear, S-single rear): Standard Front and Rear	Tire Sizes: Maximum Authorized Tire Size (Duals unless noted)	Engine: Make and Model	No. of Cylinders, Bore and Stroke	Displacement	Comp. Ratio	Torque lb. ft.	Max. Brake H.P. at R.P.M. Given	Transmission: Make and Model	Forward Speeds	Rear Axle: Make and Model	Gear and Type	Drive and Torque	Gear Ratio Range in High
Dodge—Cont'd M6-D200	116	116	7500		6.50/16S	8/19.5S	Own	6-3¼x4⅝	230	7.9	202	120-3600	WG T85E	3	Spi 60	Hy	H	4.1-4.89
M8-D200	116	116	7500		6.50/16	8/19.5S	Own	8-3.91x3.31	318	8.2	290	205-4400	WG T85E	3	Spi 60	Hy	H	4.1-4.89
M6-D300	126	126	9000		7/17.5S	7/17.5S	Own	6-3¼x4⅝	230	7.9	202	120-3600	NP 420	4	Own D300	Hy	H	4.1-4.89
M8 D300	126	126	9000		7/17.5S	8/19.5	Own	8-3.91x3.31	318	8.2	290	205-4400	NP 420	4	Own D300	Hy	H	4.1-4.89
M6-D400	129	171	15000		7/22.5	9/22.5	Own	6-3.43x4.50	251	7.1	216	125-3600	NP 420	4	Own D300	Hy	H	6.28-6.83
M8-D400	129	171	15000		7/22.5	9/22.5	Own	8-3.91x3.31	318	8.2	292	207-4400	NP 420	4	Own D400	Hy	H	6.28-6.83
M6-D500	129	217	19500		8/22.5	10/22.5	Own	6-3.43x4.50	251	7.1	216	125-3600	NP 420	4	Tim F147	Hy	H	6.2-6.8
M8-D500	129	217	19500		8/22.5	10/22.5	Own	8-3.91x3.31	318	8.2	292	207-4400	NP 420	4	Tim F147	Hy	H	6.2-6.8
M6-D600	129	236	22000		8/22.5	10/22.5	Own	6-3.43x4.76	265	7.1	228	130-3600	NP 420	4	Eat 1614	Hy	H	6.5-7.17
M8-D600	129	236	22000		8/22.5	10/22.5	Own	8-3.63x3.80	315	7.6	300	210-4400	NP 540	5	Eat 1614	Hy	H	6.5-7.17
M8-D700	129	236	25000		9/22.5	10/22.5	Own	8-3.94x3.63	354	7.5	319	218-3900	NP 540	5	Tim H141	Hy	H	** -6.8
M8-D800	132	192	29000		10/22.5	12/22.5	Own	8-3.94x3.63	354	7.5	340	224-3900	Cla 265V	5	Tim L140	Hy	H	** -7.2
M8-D900	132	192	30000		11/22.5	12/22.5	Own	8-3.94x3.63	354	7.5	360	234-3900	Cla 300	5	Tim QT140	Hy	H	** -7.4
(c.o.e.) M8-C500	108	162	19500		8/22.5	10/22.5	Own	8-3.63x3.80	315	7.6	300	210-4400	NP 420	4	Tim F147	Hy	H	6.2-6.8
(c.o.e.) M8-C600	108	162	22000		8/22.5	10/22.5	Own	8-3.63x3.80	315	7.6	300	210-4400	NP 540	5	Eat 1614	Hy	H	6.5-7.17
(c.o.e.) M8-C700	108	162	25000		9/22.5	10/22.5	Own	8-3.94x3.63	354	7.5	319	218-3900	NP 540	5	Tim H141	Hy	H	** -6.80
(c.f.) M6-P300	104	126	9000		7/17.5S	7/17.5	Own	6-3¼x4⅝	230	7.9	202	120-3600	WG T87E	3	Own P300	Hy	H	4.1-4.89
(c.f.) M8-P300	104	126	9000		7/17.5S	7/17.5	Own	8-3.91x3.31	318	8.2	290	205-4400	WG T87E	3	Own P300	Hy	H	4.1-4.83
(c.f.) M6-P400	108	153	15000		8/19.5S	8/22.5	Own	6-3¼x4⅝	230	7.9	202	120-3600	WG T87E	3	Own P400	Hy	H	5.62-6.83
(c.f.) M8-P400	108	153	15000		8/19.5S	8/22.5	Own	8-3.91x3.31	318	8.2	290	205-4400	WG T87E	3	Own P400	Hy	H	5.62-6.83
(Sc. Bus) M6-S400	153	153	15000		7/22.5	8/22.5	Own	6-3.43x4.50	251	7.1	216	125-3600	NP 420	4	Own S400	HF	H	6.28-6.83
(Sc. Bus) M8-S400	153	153	15000		7/22.5	8/22.5	Own	8-3.91x3.31	318	8.2	292	207-4400	NP 420	4	Own S400	HF	H	6.28-6.83
(Sc. Bus) M6-S500	193	217	19500		8/22.5	10/22.5	Own	6-3.43x4.50	251	7.1	216	125-3600	NP 420	4	Tim F147	HF	H	6.2-6.8
(Sc. Bus) M8 S500	193	217	19500		8/22.5	10/22.5	Own	8-3.91x3.31	318	8.2	292	207-4400	NP 420	4	Tim F147	HF	H	6.2-6.8
(Sc. Bus) M8-S600	236	236	22000		8/22.5	10/22.5	Own	8-3.63x3.80	315	7.6	300	210-4400	NP 420	4	Eat 1614	HF	H	6.5-7.17
(Sc. Bus) M8 S700	236	254	23000		8/22.5	10/22.5	Own	8-3.94x3.63	354	7.5	319	218-3900	NP 540	5	Tim H141	HF	H	** -6.8
Duplex T-308	136	220	23000	^6600	8.25/20	9.00/20	Int BD308	6-3 11/16x4½	308	6.5	273	145-3600	Fu 5B330	5	Tim H140	B	H	** -7.2
R-427	136	220	30000	^8820	9.00/20	11.00/20	Con B6427	6-4 9/16x4⅜	427	6.6	325	141-2500	Fu 5A43	5	Tim QT340	Fd	R	6.42-8.38
R-450	136	220	30000	^8850	9.00/20	11.00/20	Int RD450	6-4⅝x5	450	6.5	388	182-3000	Fu 5A43	5	Tim QT340	Fd	R	6.42-8.38
KH	148	220	34000	^10500	11.00/20	12.00/20	Her RXC	6-4⅝x5¼	529	5.4	395	132-2300	Fu 5A620	5	Tim U200	2F	R	** -9.76
K-501	148	220	34000	^10500	11.00/20	12.00/20	Int RD501	6-4½x5¼	501	6.5	444	212-3000	Fu 5A620	5	Tim U200	2F	R	** -9.76
L	148	220	37000	^11300	11.00/20	12.00/20	Her RXLD	6-4¾x5¼	558	5.4	430	154-2400	Fu 5C650	5	Tim U200	2F	R	** -9.76
(D) L-6602	148	220	37000	^11650	11.00/20	12.00/20	Con R6602	6-4⅞x5⅜	602	6.1	465	200-2600	Fu 5C650	5	Tim U200	2F	R	** -9.76
LC-600	148	220	37000	^12900	11.00/20	12.00/20	Cum HRB600	6-5⅛x6	743	16.0	540	165-1800	Fu 5C650	5	Tim U200	2F	R	** -6.42
Federal 200R1	145	193	22000	^6570	8.25/20		Her JXD	6-4x4¼	320		254	125-3200	Cla 205V	5	Tim H140	H		** -7.20
(D) D200R1	145	193	22000	^6990	8.25/20		Con TD6427	6-4 9/16x4⅜	427		307	116-2400	Cla 290V	5	Tim H140	H		** -6.17
200R2	145	193	22000	^6570	8.25/20		Her JXD	6-4x4¼	320		254	125-3200	Cla 205V	5	Tim H340	2H		6.16-8.48
(D) D200R2	145	193	22000	^6990	8.25/20		Con TD6427	6-4 9/16x4⅜	427		307	116-2400	Cla 290V	5	Tim H340	2H		6.16-8.48
300R1	145	193	24000	^6875	9.00/20		Her JXLD	6-4x4½	339		264	138-3200	Cla 205V	5	Tim L140	H		** -6.17
(D) D300R1	145	193	24000	^7450	9.00/20		Cum JN6B	6-4⅛x5	401		290	125-2500	Cla 290V	5	Tim L140	H		** -6.17
300R2	145	193	24000	^6875	9.00/20		Her JXLD	6-4x4½	339		264	138-3200	Cla 205V	5	Tim L340	2H		6.63-8.52
(D) D300R2	145	193	24000	^7450	9.00/20		Cum JN6B	6-4⅛x5	401		290	125-2500	Cla 290V	5	Tim L340	2H		6.36-8.28
400R1	145	193	29000	^9372	10.00/20		Con T6427	6-4 9/16x4⅜	427		356	179-3000	Cla 290V	5	Tim QT140	H		** -6.83
(D) D400R1	145	193	29000	^9672	10.00/20		Cum JBS600	6-4⅛x5	401		350	150-2500	Cla 290V	5	Tim QT140	H		** -6.83
400R2	145	193	29000	^9602	10.00/20		Con T6427	6-4 9/16x4⅜	427		356	179-3000	Cla 290V	5	...QT340	2H		6.65-9.17
(D) D400R2	145	193	29000	^9902	10.00/20		Cum JBS600	6-4⅛x5	401		350	150-2500	Cla 290V	5	...QT340	2H		6.65-9.17
500R1	145	193	34000	^10080	11.00/22		Con U6501	6-4½x5¼	501		413	178-2600	Fu 5A65	5	...R140	H		** -6.83
(D) D500R1	145	193	34000	^11240	11.00/22		Cum HRFB600	6-5⅛x6	743		550	180-2000	Fu 5A65	5	...R140	H		** -6.83
500R2	145	193	34000	^10300	11.00/22		Con U6501	6-4½x5½	501		413	178-2600	Fu 5A65	5	...RT340	2H		6.31-8.39
(D) D500R2	145	193	34000	^11395	11.00/22		Cum HRFB600	6-5⅛x6	743		550	180-2000	Fu 5A65	5	...R340	2H		6.31-8.39
600R1	145	193	40000	^11132	11.00/22		Con R6602	6-4⅞x5⅜	602		484	232-2800	Fu 5A65	5	Tim U200	2H		** -7.20
600R2	145	193	40000	^11285	11.00/22		Con R6602	6-4⅞x5⅜	602		484	232-2800	Fu 5A65	5	Tim U300	2H		6.42-8.38
(D) D700R1	145	193	40000	^12545	11.00/22		Cum NHB600	6-5⅛x6	743		535	210-2100	...8051A	5	Tim U200	2H		** -7.20
(D) D700R2	145	193	40000	^12690	11.00/22		Cum NHB600	6-5⅛x6	743		535	210-2100	...8051A	5	Tim U300	2H		6.42-8.38
200R53	157	193	28000	^7825	8.25/20		Her JXD	6-4x4¼	320		254	125-3200	Cla 205V	5	...SDHD	H		** -7.20
(D) D200R53	157	193	28000	^8075	8.25/20		Con TD6427	6-4 9/16x4⅜	427		307	116-2400	Cla 290V	5	...SDHD	H		** -7.20
200R54	157	193	28000	^7825	8.25/20		Her JXD	6-4x4¼	320		254	125-3200	Cla 205V	5	...SDHD	H		** -7.20
(D) D200R54	157	193	28000	^8245	8.25/20		Con TD6427	6-4 9/16x4⅜	427		307	116-2400	Cla 290V	5	...SDHD	H		** -7.20
300R53	157	193	34000	^8059	9.00/20		Her JXLD	6-4x4½	339		264	138-3200	Cla 205V	5	...SFHD	H		** -7.20
(D) D300R53	157	193	34000	^8634	9.00/20		Cum JN6B	6-4⅛x5	401		290	125-2500	Cla 290V	5	...SFHD	H		** -7.20
300R54	157	193	34000	^8229	9.00/20		Her JXLD	6-4x4½	339		264	138-3200	Cla 205V	5	...SFHD	H		** -7.20
(D) D300R54	157	193	34000	^8804	9.00/20		Cum JN6B	6-4⅛x5	401		290	125-2500	Cla 290V	5	...SFHD	H		** -6.17
400R53	157	193	42000	^11177	10.00/20		Con T6427	6-4 9/16x4⅜	427		356	179-3000	Cla 290V	5	...SLHD	H		** -7.20
(D) D400R53	157	193	42000	^11477	10.00/20		Cum JBS600	6-4⅛x5	401		350	150-2500	Cla 290V	5	...SLHD	H		** -7.20
400R54	157	193	42000	^11452	10.00/20		Con T6427	6-4 9/16x4⅜	427		356	179-3000	Cla 290V	5	...SLHD	H		** -7.20
(D) D400R54	157	193	42000	^11752	10.00/20		Cum JBS600	6-4⅛x5	401		350	150-2500	Cla 290V	5	...SLHD	H		** -7.20
500R53	157	193	49000	^13200	11.00/22		Con U6501	6-4½x5¼	501		413	178-2600	Fu 5A65	5	...SQDD	H		** -6.83
(D) D500R53	157	193	49000	^14200	11.00/22		Cum HRFB600	6-5⅛x6	743		550	180-2000	Fu 5A65	5	...SQDD	H		** -6.83
500R54	157	193	49000	^13475	11.00/22		Con U6501	6-4½x5¼	501		413	178-2600	Fu 5A65	5	...SQDD	H		** -6.83
(D) D500R54	157	193	49000	^14405	11.00/22		Cum HRFB600	6-5⅛x6	713		550	180-2000	Fu 5A65	5	...SQDD	H		** -6.83
600R53	157	193	61000	^14932	11.00/22		Con R6602	6-4⅞x5⅜	602		484	232-2800	Fu 5A65	5	...SFDD4600	2H		** -8.07
600R54	157	193	61000	^15207	11.00/22		Con R6602	6-4⅞x5⅜	602		484	232-2800	Fu 5A65	5	...SFDD4600	2H		** -8.07
(D) D700R53	157	193	61000	^17180	11.00/22		Cum NHB600	6-5⅛x6	743		535	210-2100	...8051A	5	...SFD4600	2H		** -8.07
(D) D700R54	157	193	61000	^17640	11.00/22		Cum NHB600	6-5⅛x6	743		535	210-2100	...8051A	5	...SFD4600	2H		** -8.07
Ford Ranchero	118	118	4600	3446	7.50/14S	8.00/14S	Ford EBP	6-3⅝x3 19/32	223	8.6	212	145-4200	Ford*	3	Ford 3000	H½	H	3.89-*
	118	118	4600	3557	7.50/14S	8.00/14S	Ford EDB	8-3¾x3 5/16	292	9.1	295	200-4400	Ford*	3	Ford 3000	H½	H	3.89-*
	118	118	4600	3615	7.50/14S	8.00/14S	Ford EDT	8-4x3½	352	10.0	395	300-4600	Ford*	3	Ford 3000	H½	H	3.70-*
Courier	118	118	4600	3476	7.50/14S	8.00/14S	Ford EBP	6-3⅝x3 19/32	223	8.6	212	145-4200	Ford*	3	Ford 3000	H½	H	3.89-*
	118	118	4600	3587	7.50/14S	8.00/14S	Ford EDB	8-3¾x3 5/16	292	9.1	295	200-4400	Ford*	3	Ford 3000	H½	H	3.89-*
	118	118	4600	3645	7.50/14S	8.00/14S	Ford EDT	8-4x3½	352	10.0	395	300-4600	Ford*	3	Ford 3000	H½	H	3.70-*
F-100	110	118	5000	^3030	6.70/15S	7/17.5S	Ford EBR	6-3⅝x3 19/32	223	8.3	207	139-4200	Ford*	3	Ford 3300	H½	H	3.70-*
	110	118	5000	^3030	6.70/15S	7/17.5S	Ford EEH	8-3¾x3 5/16	292	7.9	269	186-4000	Ford*	3	Ford 3300	H½	H	3.70-*
F-250	118	118	7400	^3370	6.50/16S	8/19.5S	Ford EBR	8-3⅝x3 19/32	223	8.3	207	139-4200	Ford*	3	Spi 60	HF	H	** -4.88
	118	118	7400	^3370	6.50/16S	8/19.5S	Ford EEH	8-3¾x3 5/16	292	7.9	269	186-4000	Ford*	3	Spi 60	HF	H	** -4.56
F-350	130	130	9800	^3740	8/17.5S	8/19.5S	Ford EBR	6-3⅝x3 19/32	223	8.3	207	139-4200	WG T98A*	4	Tim B100	HF	H	5.14-*
	130	130	9800	^3740	8/17.5S	8/19.5S	Ford EEH	8-3¾x3 5/16	292	7.9	269	186-4000	WG T98A*	4	Tim B100	HF	H	4.86-*
	130	130	9800	^3740	8/17.5D	8/17.5	Ford EEJ	8-3¾x3 5/16	292	7.9	269	186-4000	WG T98A*	4	Tim B100	HF	H	5.14-*

For references and abbreviations see page 122

For Directory of the Truck Manufacturers listed above, see Table of Contents

1959 TRUCK SPECIFICATIONS—continued

MAKE AND MODEL	WHEELBASE: Minimum Standard	WHEELBASE: Maximum Standard	Gross Vehicle Weight for Normal Service	Chassis Weight (See definition)	TIRE SIZES (D-dual rear, S-single rear): Standard Front and Rear	TIRE SIZES: Maximum Authorized Tire Size (Duals unless noted)	ENGINE DETAILS: Make and Model	No. of Cylinders, Bore and Stroke	Displacement	Comp. Ratio	Torque lb. ft.	Max. Brake H.P. at R.P.M. Given	TRANSMISSION: Make and Model	Forward Speeds	REAR AXLE: Make and Model	Gear and Type	Drive and Torque	Gear Ratio Range in High
Ford Cont'd F-500	130	154	15000	▲4515	7/22.5D	8/22.5	Ford EBR	6-3 5/8x3 39/64	223	8.3	207	139-4200	WG T98A*	4	Tim C100*	HF	H	6.2 -*
	130	154	15000	▲4515	7/22.5D	8/22.5	Ford EEJ	8-3 3/4x3 5/16	292	7.9	269	186-4000	WG T98A*	4	Tim D100*	HF	H	5.83 -*
	130	154	15000	▲4515	7/22.5D	8/22.5	Ford EEK	8-3 3/4x3 5/16	292	7.6	270	187-3800	WG T98A*	4	Tim D100*	HF	H	5.83 -*
F-600	130	192	17000	▲4860	8/22.5D	10/22.5	Ford EBR	6-3 5/8x3 39/64	223	8.3	207	139-4200	WG T98A*	4	Tim F106*	HF	H	6.8 -*
	130	192	*17000	▲4860	8/22.5D	10/22.5	Ford EEJ	8-3 3/4x3 5/16	292	7.9	269	186-4000	WG T98A*	4	Tim F106*	HF	H	6.2 -*
	130	192	*17000	▲4860	8/22.5D	10/22.5	Ford EEK	8-3 3/4x3 5/16	292	7.6	270	187-3800	WG T98A*	4	Tim F106*	HF	H	6.2 -*
F-700	132	192	*21000	▲5420	8/22.5D	10/22.5	Ford EEJ	8-3 3/4x3 5/16	292	7.9	269	186-4000	WG T98A*	4	Tim F106*	HF	H	7.2 -*
	132	192	*21000	▲5420	8/22.5D	10/22.5	Ford EEK	8-3 3/4x3 5/16	292	7.6	270	187-3800	WG T98A*	4	Tim F106*	HF	H	7.2 -*
F-750	132	192	22000	▲5955	9/22.5D	10/22.5	Ford ECS	8-3 5/8x3 21/32	302	7.6	299	196-3800	Cla 250	5	Eat 1614*	HF	H	7.17-*
F-800	132	192	25000	▲6520	10/22.5D	11/22.5	Ford ECT	8-3 51/64x3 21/32	332	7.6	328	212-3800	Cla 265*	5	Eat 1790A*	SF	H	7.17-*
F-850	132	192	25000	▲6925	10/22.5D	11/22.5	Ford EDL	8-4 1/8x3 3/4	401	7.5	350	226-3800	Spi 4652*	5	Eat 1790A*	SF	H	6.50-7.17
F-950	132	192	29000	▲7540	11/22.5D	12/24.5	Ford EDL	8-4 1/8x3 3/4	401	7.5	350	226-3800	Spi 4652*	5	Eat 1892*	SF	H	6.50-7.17
F-1000	132	192	30000	▲7870	11/22.5D	12/24.5	Ford EDM	8-4 1/2x3 3/4	477	7.5	430	260-3600	Spi 6352*	5	Eat 1893*	SF	H	6.50-7.17
F-1100	132	192	30000	▲8045	11/22.5D	12/24.5	Ford EDN	8-4 1/2x4 13/64	534	7.5	490	277-3400	Spi 6352*	5	Eat 1911*	SF	H	6.17-6.67
C-850	99	153	26000	▲7345	10/22.5D	11/22.5	Ford EDL	8-4 1/8x3 3/4	401	7.5	350	226-3800	Spi 4652*	5	Eat 1790A*	SF	H	6.50-7.17
C-950	99	153	30000	▲7980	11/22.5D	12/24.5	Ford EDL	8-4 1/8x3 3/4	401	7.5	350	226-3800	Spi 4652*	5	Eat 1892*	SF	H	6.50-7.17
C-1000	99	153	31000	▲8490	11/22.5D	12/24.5	Ford EDM	8-4 1/2x3 3/4	477	7.5	430	260-3600	Spi 6352*	5	Eat 1893*	SF	H	6.50-7.17
C-1100	99	153	31000	▲8660	11/22.5D	12/24.5	Ford EDN	8-4 1/2x4 13/64	534	7.5	490	277-3400	Spi 6352*	5	Eat 1911*	SF	H	6.17-6.67*
C-550	99	153	18000	▲5330	7/22.5D	9/22.5	Ford EEJ	8-3 3/4x3 5/16	292	7.9	269	186-4000	WG T98A*	4	Tim D100*	HF	H	5.83-*
	99	153	18000	▲5330	7/22.5D	9/22.5	Ford EEK	8-3 3/4x3 5/16	292	7.6	270	187-3800	WG T98A*	4	Tim D100*	HF	H	5.83-*
C-600	99	153	*19500	▲5520	8/22.5D	10/22.5	Ford EEJ	8-3 3/4x3 5/16	292	7.9	269	186-4000	WG T98A*	4	Tim F104*	HF	H	6.2 -*
	99	153	*19500	▲5520	8/22.5D	10/22.5	Ford EEK	8-3 3/4x3 5/16	292	7.6	270	187-3800	WG T98A*	4	Tim F104*	HF	H	6.2 -*
C-700	99	153	*22000	▲5965	8/22.5D	10/22.5	Ford EEJ	8-3 3/4x3 5/16	292	7.9	269	186-4000	WG T98A*	4	Tim F106N*	HF	H	7.2 -*
	99	153	*22000	▲5965	8/22.5D	10/22.5	Ford EEK	8-3 3/4x3 5/16	292	7.6	270	187-3800	WG T98A*	4	Tim F106N*	HF	H	7.2-*
C-750	99	153	23000	▲6660	9/22.5D	10/22.5	Ford ECS	8-3 5/8x3 21/32	302	7.6	299	196-3800	Cla 265	5	Eat 1614*	HF	H	7.17-*
C-800	99	153	26000	▲6960	10/22.5D	11/22.5	Ford ECT	8-3 51/64x3 21/32	332	7.6	328	212-3800	Cla 265V*	5	Eat 1790A*	SF	H	7.17-*
B-500	154	154	15000	4250	7/22.5D	9/22.5	Ford EBS	6-3 5/8x3 39/64	223	8.3	207	139-4200	WG T98A*	4	Tim C100*	HF	H	6.2 -*
	154	154	15000	4250	7/22.5D	9/22.5	Ford FEJ	8-3 3/4x3 5/16	292	7.9	269	186-4000	WG T98A*	4	Tim D100*	HF	H	5.83-*
	154	154	15000	4250	7/22.5D	9/22.5	Ford EEK	8-3 3/4x3 5/16	292	7.6	270	187-3800	WG T98A*	4	Tim D100*	HF	H	5.83-*
B-600	192	220	17000	4800	8/22.5D	10/22.5	Ford EBS	6-3 5/8x3 39/64	223	8.3	207	139-4200	WG T98A*	4	Tim F106*	HF	H	6.8 -*
	192	220	*17000	4800	8/22.5D	10/22.5	Ford EEJ	8-3 3/4x3 5/16	292	7.9	269	186-4000	WG T98A*	4	Tim F106*	HF	H	6.2 -*
	192	220	*17000	4800	8/22.5D	10/22.5	Ford EEK	8-3 3/4x3 5/16	292	7.6	270	187-3800	WG T98A*	4	Tim F106*	HF	H	6.2 -*
B-700	245	262	*21000	5695	8/22.5D	10/22.5	Ford EEJ	8-3 3/4x3 5/16	292	7.9	269	186-4000	WG T98A*	4	Tim F106*	HF	H	7.2 -*
	245	262	*21000	5695	8/22.5D	10/22.5	Ford EEK	8-3 3/4x3 5/16	292	7.6	270	187-3800	WG T98A*	4	Tim F106*	HF	H	7.2 -*
B-750	245	262	22000	6185	9/22.5D	10/22.5	Ford ECS	8-3 5/8x3 21/32	302	7.6	299	196-3800	Cla 250	5	Eat 1614*	HF	H	7.17-*
P-350	104	122	8000	2405	7/17.5S	8/19.5S	Ford EBT	6-3 5/8x3 39/64	223	8.3	207	139-4200	Ford*	3	Spi 60*	HF	H	4.88-*
	104	122	8000	2405	7/17.5S	8/19.5S	Ford EEJ	8-3 3/4x3 5/16	292	7.9	269	186-4000	Ford*	3	Spi 60*	HF	H	4.56-*
P-400	137	137	10000	3115	8/17.5S	8/19.5S	Ford EBT	6-3 5/8x3 39/64	223	8.3	207	139-4200	WG T89C*	3	Tim B100	HF	H	5.14-*
	137	137	10000	3115	8/17.5S	8/19.5S	Ford EEJ	8-3 3/4x3 5/16	292	7.9	269	186-4000	WG T89C*	3	Tim B100	HF	H	4.86-*
P-500	137	154	15000	3385	8/19.5S	8/22.5	Ford EBT	6-3 5/8x3 39/64	223	8.3	207	139-4200	WG T87D*	3	Tim C100*	HF	H	6.2 -*
	137	154	15000	3385	8/19.5S	8/22.5	Ford EEJ	8-3 3/4x3 5/16	292	7.9	269	186-4000	WG T87D*	3	Tim C100*	HF	H	5.83-*
T-700	144	192	28000	▲7815	8/22.5D	9/22.5	Ford EEK	8-3 3/4x3 5/16	292	7.6	270	187-3800	Cla 250	5	Eat 22M	SF	H	6.70-7.79
	144	192	28000	▲7815	8/22.5D	9/22.5	Ford ECS	8-3 5/8x3 21/32	302	7.6	299	196-3800	Cla 250	5	Eat 22M	SF	H	6.70-7.79
	144	192	32000	▲7815	8/22.5D	10/22.5	Ford EEK	8-3 3/4x3 5/16	292	7.6	270	187-3800	Cla 250	5	Eat 28M	SF	H	7.07-7.79
	144	192	32000	▲7815	8/22.5D	10/22.5	Ford ECS	8-3 5/8x3 21/32	302	7.6	299	196-3800	Cla 250	5	Eat 28M	SF	H	7.07-7.79
T-750	144	192	37000	▲9165	9/22.5D	11/22.5	Ford ECT	8-3 51/64x3 21/32	332	7.6	328	212-3800	Cla 265*	5	Eat 28M	SF	H	7.79-7.07
T-800	144	192	*43000	▲9715	10/22.5D	11/22.5	Ford ECT	8-3 51/64x3 21/32	332	7.6	328	212-3800	Cla 265*	5	Eat 34M	SF	H	8.6 -7.8
T-850	144	192	*43000	▲10120	10/22.5D	11/22.5	Ford EDL	8-4 1/8x3 3/4	401	7.5	350	226-3800	Spi 4652*	5	Eat 34M*	SF	H	6.69-8.6*
	144	192	*43000	▲10120	10/22.5D	11/22.5	Ford EDM	8-4 1/2x3 3/4	477	7.5	430	260-3600	Spi 6352*	5	Eat 34M*	SF	H	6.69-8.6*
	144	192	*43000	▲10120	10/22.5D	11/22.5	Ford EDN	8-4 1/2x4 13/64	534	7.5	490	277-3400	Spi 6352*	5	Eat 34M*	SF	H	6.69 8.6
T-950	156	192	*46000	▲11405	11/22.5D	12/24.5	Ford EDL	8-4 1/8x3 3/4	401	7.5	350	226-3800	Spi 4652*	5	Eat 38D	SF	H	7.6 8.38*
	156	192	*46000	▲11405	11/22.5D	12/24.5	Ford EDM	8-4 1/2x3 3/4	477	7.5	430	260-3600	Spi 6352*	5	Eat 38D	SF	H	7.6 8.38*
	156	192	*46000	▲11405	11/22.5D	12/24.5	Ford EDN	8-4 1/2x4 13/64	534	7.5	490	277-3400	Spi 6352*	5	Eat 38D	SF	H	7.6 8.38*
Kenworth (D) ♦905			33000	10750	10.00/20	11.00/22	Cum JTB	6-4 1/8x5	401	16.0	350	180-2400	5A65▲▲	15	Tim R200	H2F	H	
(D) ♦908			43000	12700	10.00/20	11.00/22	Cum JTB	6-4 1/8x5	401	16.0	350	180-2400	5A65▲▲	15	Tim R200♦	H2F	H	
(D) ♦909			45000	13900	10.00/20	11.00/22	Cum JTB	6-4 1/8x5	401	16.0	350	180-2400	5A65▲▲	15	Tim SQW	WF	H	
(D) ♦921	153 1/4	255	33000	11800	10.00/20	11.00/22	Cum NH220	6-5 1/8x6	743	16.0	535	220-2100	8241▲▲	15	Tim R200	H2F	H	5.91-9.76
♦985	153 1/4	255	33000	10500	10.00/20	11.00/22	H.S. 590GV3	6-5x5	590	6.6	490	232-2800	Fu 5C72▲▲	15	Tim R200	H2F	H	5.91-9.76
(D) ♦922	191	255	42000	13800	10.00/20	11.00/22	Cum NH220	6-5 1/8x6	743	16.0	535	220-2100	8241▲▲	15	Tim R200♦♦	2F	H	5.91-9.76
(D) ♦923	190	255	45000	15000	10.00/20	11.00/22	Cum NH220	6-5 1/8x6	743	16.0	535	220-2100	8241▲▲	15	Tim SQW	WF	L	5.67-8.20
(D) ♦924	190	255	61000	16200	10.00/20	11.00/22	Cum NH220	6-5 1/8x6	743	16.0	535	220-2100	8241▲▲	15	Tim SW456	WF	L	4.72-8.20
(D) L924	190	255	65000	16400	11.00/22	11.00/24	Cum NH220	6-5 1/8x6	743	16.0	535	220-2100	8241▲▲	15	Tim SFD4640	B2F	L	8.07-11.5
(D) ♦925	190	255	43000	14020	10.00/20	11.00/22	Cum NH220	6-5 1/8x6	743	16.0	535	220-2100	8241▲▲	15	Tim SQHD			
♦928	190	255	42000	12500	10.00/20	11.00/22	H.S. 590GV3	6-5x5	590	6.6	490	232-2800	Fu 5C72▲▲	15	Tim R200	H2F	H	5.91-9.76
♦929	190	255	45000	13700	10.00/20	11.00/22	H.S. 590GV3	6-5x5	590	6.6	490	232-2800	Fu 5C72▲▲	15	Tim SQW	WF	L	5.67-8.20
(D) 552	178		54000	22500	13.00/24	13.00/24	Cum NH220	6-5 1/8x6	743	16.0	535	220-2100	8241▲▲	15	Tim SFD4640	B2F	L	8.07-11.5
(D) 848	210 3/4	234 1/2	65000	22800	12.00/24	14.00/24	Cum NH220	6-5 1/8x6	743	16.0	535	200-2100	8241▲▲	15	Tim SFD4640	B2F	L	8.07-11.5
(D) 849	210 3/4	234 1/2	65000	22800	12.00/24	14.00/24	Cum NH220	6-5 1/8x6	743	16.0	535	200-2100	8241▲▲	15	Tim SFD4640	B2F	L	8.07-11.5
Marmon-Herr. (Sc. Bus Ch.) 4SC	178 1/16	178	24000	7840	9.00/20D	10.00/20	Ford ECT2V	8-3 51/64x3 21/32	332	7.5	318	200-3800		5		HF	H	6.8-7.2
(Sc. Bus Ch.) 6SC	205	205	24000	7900	9.00/20D	10.00/20	Ford ECT2V	8-3 51/64x3 21/32	332	7.5	318	200-3800		5		HF	H	6.8-7.2
(Sc. Bus Ch.) 5SC	233	233	24000	7970	9.00/20D	10.00/20	Ford ECT2V	8-3 51/64x3 21/32	332	7.5	318	200-3800		5		HF	H	6.8-7.2
(Sc. Bus Ch.) 4SC	178	178	24000	7840	9.00/20D	10.00/20	Ford ECT4V	8-3 51/64x3 21/32	332	7.5	326	212-3800		5		HF	H	6.8-7.2
(Sc. Bus Ch.) 6SC	205	205	24000	7900	9.00/20D	10.00/20	Ford ECT4V	8-3 51/64x3 21/32	332	7.5	326	212-3800		5		HF	H	6.8-7.2
(Sc. Bus Ch.) 5SC	233	233	24000	7970	9.00/20D	10.00/20	Ford ECT4V	8-3 51/64x3 21/32	332	7.5	326	212-3800		5		HF	H	6.8-7.2
Peterbilt (D) 280	175	Opt	27000	12500	10.00/20D	11.00/22	Cum NHB600	6-5 1/8x6	743	17.0	500	200-2100	Spi 8041	12	Tim R230DPA	2F	R	5.91-6.51
(c.o.e.) 281	114	Opt	27000		10.00/20	11.00/22	Cum NHB600	6-5 1/8x6	743	17.0	500	200-2100	Spi 8041	12	Tim R230DPA	2F	R	5.91-6.51
(D) 281	165	Opt	27000	10450	10.00/20	11.00/22	Cum NHB600	6-5 1/8x6	743	17.0	500	200-2100	Spi 8045	12	Tim R230P	2F	R	5.91-6.51
Reo C-200	125	185	18500	▲5355	8/22.5	10/22.5	Own OA110‡	6-3 5/8x4 1/8	255	6.7	194	110-3400	WG T98A	4	Tim F140♦	HF	H	6.2-7.2
C-201	125	185	19500	▲5355	8/22.5	10/22.5	Own OA110‡	6-3 5/8x4 1/8	255	6.7	194	110-3400	WG T98A	4	Tim F140♦	HF	H	6.2-7.2
C-202	125	185	20500	▲5575	8/22.5	10/22.5	Own OA110‡	6-3 5/8x4 1/8	255	6.7	194	110-3400	WG T98A	4	Tim F140♦	HF	H	6.2-7.2
C-203	125	185	18500	▲6215	8/22.5	10/22.5	Own OA110‡	6-3 5/8x4 1/8	255	6.7	194	110-3400	WG T98A	4	Tim F340	HFd	H	6.16-8.82
C-300	130	185	21000	▲6295	10/22.5	11/22.5	Own OA130♦	6-3 7/8x4 1/8	292	6.9	230	130-3300	Cla 205V	5	Tim H140♦	HF	H	6.16-7.2
C-301	130	185	23000	▲6295	10/22.5	11/22.5	Own OA130♦	6-3 7/8x4 1/8	292	6.9	230	130-3300	Cla 205V	5	Tim H140♦	HF	H	6.16-7.2
C-302	130	185	23000	▲6330	10/22.5	11/22.5	Own OA130♦	6-3 7/8x4 1/8	292	6.9	230	130-3300	Cla 205V	5	Tim H140♦	HF	H	6.16-7.2
C-303	130	185	21000	▲7095	10/22.5	11/22.5	Own OA130♦	6-3 7/8x4 1/8	292	6.9	230	130-3300	Cla 205V	5	Tim H340	HFd	H	6.16-8.72
C-400	130	185	23500	▲6590	10/22.5	11/24.5	Own OA145†	6-4 1/8x4 1/8	331	6.7	270	145-3200	Cla 205V	5	Tim L140♦	HF	H	6.16-7.2
C-401	130	185	25500	▲6590	10/22.5	11/24.5	Own OA145†	6-4 1/8x4 1/8	331	6.7	270	145-3200	Cla 205V	5	Tim L140♦	HF	H	6.16-7.2
C-402	130	185	26000	▲6880	10/22.5	11/24.5	Own OA145†	6-4 1/8x4 1/8	331	6.7	270	145-3200	Cla 205V	5	Tim L140♦	HF	H	6.16-7.2

For references and abbreviations see page 122

For Directory of the Truck Manufacturers listed above, see Table of Contents

1959 TRUCK SPECIFICATIONS—continued

MAKE AND MODEL	WHEELBASE				TIRE SIZES (D-dual rear, S-single rear)		ENGINE DETAILS						TRANSMISSION		REAR AXLE			
	Minimum Standard	Maximum Standard	Gross Vehicle Weight for Normal Service	Chassis Weight (See definition)	Standard Front and Rear	Maximum Authorized Tire Size (Duals unless noted)	Make and Model	No. of Cylinders, Bore and Stroke	Displacement	Comp. Ratio	Torque lb. ft.	Max. Brake H.P. at R.P.M. Given	Make and Model	Forward Speeds	Make and Model	Gear and Type	Drive and Torque	Gear Ratio Range in High
Reo—Cont'd. C-403	130	185	23500	*7515	10/22.5	11/24.5	Own OA145†	6-4 1/8x4 1/8	331	6.7	270	145-3200	Cla 205V	5	Tim L340	HFd	H	5.99-8.73
C-500	130	185	29000	*7715	11/22.5	12/22.5	Own OH170■	6-4 1/8x4 1/8	331	7.5	297	170-3400	Spi 3152	5	Tim QT140♦	HF	H	6.16-7.8
C-501	130	185	31000	*7715	11/22.5	12/22.5	Own OH170■	6-4 1/8x4 1/8	331	7.5	297	170-3400	Spi 3152	5	Tim QT140♦	HF	H	6.16-7.8
C-502	130	185	31000	*7785	11/22.5	12/22.5	Own OH170■	6-4 1/8x4 1/8	331	7.5	297	170-3400	Spi 3152	5	Tim QT140♦	HF	H	6.16-7.8
C-503	130	185	29000	*8380	11/22.5	12/22.5	Own OH170■	6-4 1/8x4 1/8	331	7.5	297	170-3400	Spi 3152	5	Tim QT340♦	HFd	H	6.00-9.01
(c.o.e.) AC-403	108		26000	*8850	10/22.5	11/24.5	Own OA145†	6-4 1/8x4 1/8	331	6.7	270	145-3200	Cla 205V	5	Tim L340	HFd	H	5.99-8.73
(c.o.e.) AC-503	108		29000	*9150	11/22.5	12/22.5	Own OH170■	6-4 1/8x4 1/8	331	7.5	297	170-3400	Spi 3152	5	Tim QT340	HFd	H	6.00-9.01
A-600	139		29000	*8530	11/22.5	12/24.5	Own OV207▼	8-3 7/8x4 1/8	390	7.3	354	207-3400	Fu 5A65	5	Tim QT140♦	HF	H	5.28-7.8
A-601	139		31000	*8530	11/22.5	12/24.5	Own OV207▼	8-3 7/8x4 1/8	390	7.3	354	207-3400	Fu 5A65	5	Tim QT140♦	HF	H	5.28-7.8
A-602	139		31000	*8545	11/22.5	12/24.5	Own OV207▼	8-3 7/8x4 1/8	390	7.3	354	207-3400	Fu 5A65	5	Tim QT140♦	HF	H	5.28-7.8
A-603	133		29000	*9060	11/22.5	12/24.5	Own OV207▼	8-3 7/8x4 1/8	390	7.3	354	207-3400	Fu 5A65	5	Tim QT340	HFd	H	5.63-9.01
(D) A-603D	133		29000	*9645	11/22.5	12/24.5	Cum JT-6-B	6-4 1/8x5	401	16.0	412	175-2500	Fu 5A650	5	Tim QT340	HFd	H	4.89-7.56
(c.o.e.) AC-603	108		29000	*9535	11/22.5	12/24.5	Own OV207▼	8-3 7/8x4 1/8	390	7.3	354	207-3400	Fu R46	8	Tim QT140♦	HF	H	5.63-9.01
(D)(c.o.e.) AC-603D	108		29000	*10210	11/22.5	12/24.5	Cum JT-6-B	6-4 1/8x5	401	16.0	412	175-2500	Fu R46	8	Tim QT140♦	HF	H	4.89-7.56
A-607	151		26000	*8180	10/22.5	11/24.5	Own OV207▼	8-3 7/8x4 1/8	390	7.3	354	207-3400	Fu 5A65	5	Tim L140♦	HF	H	6.16-7.2
A-700	139		31000	*8690	11/22.5	12/24.5	Own OV207▼	8-3 7/8x4 1/8	390	7.3	354	207-3400	Fu 5A65	5	Tim R140♦	HF	H	5.28-7.4
A-701	139		33000	*8690	11/22.5	12/24.5	Own OV207▼	8-3 7/8x4 1/8	390	7.3	354	207-3400	Fu 5A65	5	Tim R140♦	HF	H	5.28-7.4
A-702	139		33000	*8705	11/22.5	12/24.5	Own OV207▼	8-3 7/8x4 1/8	390	7.3	354	207-3400	Fu 5A65	5	Tim R140♦	HF	H	5.28-7.4
A-703	133		31000	*9355	11/22.5	12/24.5	Own OV207▼	8-3 7/8x4 1/8	390	7.3	354	207-3400	Fu 5A65	5	Tim RT340	HFd	H	5.62-8.83
(D) A-703D	133		31000	*9970	11/22.5	12/24.5	Cum JT-6-B	6-4 1/8x5	401	16.0	412	175-2500	Fu 5A650	5	Tim RT340	HFd	H	4.89-7.56
(D) B-700D	158 3/4		31000	*10620	11/22.5	11.00/24	Cum NH180°	6-4 7/8x6	672	15.5	475	180-2100	Spi 6453A	5	Tim R140	HF	R	4.11-6.83
(D) B-702D	158 3/4		33000	*10670	11/22.5	11.00/24	Cum NH180°	6-4 7/8x6	672	15.5	475	180-2100	Spi 6453A	5	Tim R140	HF	R	4.11-6.83
(D) B-703D	158 3/4		31000	*11060	11/22.5	11.00/24	Cum NH180°	6-4 7/8x6	672	15.5	475	180-2100	Spi 6453A	5	Tim R140	HF	R	4.11-6.83
(D)(c.o.e.) BCL-703D	122		33000	*12070	11/22.5	12/24.5	Cum NH180°	6-4 7/8x6	672	15.5	475	180-2100	Fu R630D	10	Eat 1911	SF	R	4.11-6.67
(c.o.e.) AC-703	108		31000	*9830	11/22.5	12/24.5	Own OV207▼	8-3 7/8x4 1/8	390	7.3	354	207-3400	Fu R46	8	Tim R140♦	HF	H	5.28-7.40
(D)(c.o.e.) AC-703D	108		31000	*10505	11/22.5	12/24.5	Cum JT-6-B	6-4 1/8x5	401	16.0	412	175-2500	Fu R46	8	Tim R140♦	HF	H	4.62-6.83
(Sch. Bus) C-270L	187	187	19500	*5870	8/22.5	10/22.5	Own OA110	6-3 5/8x4 1/8	255	6.7	194	110-3400	WG T98A	4	Tim F140♦	HF	H	6.8 -7.2
(Sch. Bus) C-270G	219	219	20500	*6200	9/22.5	10/22.5	Own OA110	6-3 5/8x4 1/8	255	6.7	194	110-3400	WG T98A	4	Tim F140♦	HF	H	6.8 -7.2
(Sch. Bus) C-270H	238	238	20500	*6335	9/22.5	10/22.5	Own OA110	6-3 5/8x4 1/8	255	6.7	194	110-3400	WG T98A	4	Tim F140♦	HF	H	6.8 -7.2
(Sch. Bus) C-270J	256	256	20500	*6450	9/22.5	10/22.5	Own OA110	6-3 5/8x4 1/8	255	6.7	194	110-3400	WG T98A	4	Tim F140♦	HF	H	6.8 -7.2
(Sch. Bus) C-370H	238	238	22000	*6730	9/22.5	11/22.5	Own OA130	6-3 7/8x4 1/8	292	6.9	230	130-3300	Cla 205	4	Tim H140♦	HF	H	6.8 -7.2
(Sch. Bus) C-370J	256	256	23500	*6845	9/22.5	11/22.5	Own OA130	6-3 7/8x4 1/8	292	6.9	230	130-3300	Cla 205	4	Tim H140♦	HF	H	6.8 -7.2
(Sch. Bus) C-470H	238		23500	*6985	10/22.5	11/22.5	Own OA130	6-3 7/8x4 1/8	292	6.9	230	130-3300	Cla 205V	5	Tim L140	HF	H	6.83-7.2
(Sch. Bus) C-470J	258		23500	*6985	10/22.5	11/22.5	Own OA130	6-3 7/8x4 1/8	292	6.9	230	130-3300	Cla 205V	5	Tim L140	HF	H	6.83-7.2
(Sch. Bus) A-375	168	208	26000	7105	11/22.5	11/22.5	Own OA145	6-4 1/8x4 1/8	331	6.7	270	145-3400	Cla 205V	5	Tim H140♦	HF	H	6.8 -7.2
(Sch. Bus) A-475	168	208	28000	7240	11/22.5	11/22.5	Own OA145	6-4 1/8x4 1/8	331	6.7	270	145-3400	Cla 205V	5	Tim L140♦	HF	H	6.8 -7.2
Studebaker 4E1	112	122	5000	2070	6.00/16S	6.50/16S	Own 1E	6-3x4	170	8.0	133	75-3600	WG T90B	3	Spi. 2211	H½	...	4.27-4.55
4E2	112	122	5000	2380	6.00/16S	6.50/16S	Own 3E	8-3 9/16x3 1/4	259	7.5	225	141-3800	WG T89C	3	Spi. 2211	H½	...	3.73-4.55
4E3	112	122	5000	2290	6.00/16S	6.50/16S	Own 4E	6-3 5/16x4 3/4	246	7.5	196	94-3200	WG T90B	3	Spi. 2211	H½	...	4.09-4.55
4E5	112	122	5000	2070	7.10/15S	6.50/16S	Own 1E	6-3x4	170	8.0	133	75-3600	WG T90B	3	Spi. 2211	H½	...	4.27-4.55
4E6	112	122	5200	2290	7.10/15S	6.50/16S	Own 4E	6-3 5/16x4 3/4	246	7.5	196	94-3200	WG T90B	3	Spi. 2211	H½	...	4.09-4.55
4E7	112	122	5200	2380	7.10/15S	6.50/16S	Own 3E	8-3 9/16x3 1/4	259	7.5	225	141-3800	WG T89C	3	Spi. 2211	H½	...	3.73-4.55
4E11	112	122	7000	2535	7.00/16S	7.50/17S	Own 4E	6-3 5/16x4 3/4	246	7.5	196	94-3200	WG T90B	3	Spi. 60	HF	...	4.10-4.88
4E12	112	122	7000	2625	7.00/16S	7.50/17S	Own 3E	8-3 9/16x3 1/4	259	7.5	225	141-3800	WG T89C	3	Spi. 60	HF	...	4.10-4.88
4E13	131	131	10000	3140	7.00/17S	7.50/16	Own 3E	8-3 9/16x3 1/4	259	7.5	225	141-3800	WG T98A	4	Tim B100	HF	...	4.86-5.14
4E14	131	131	10000	3050	7.00/17S	7.50/16	Own 4E	6-3 5/16x4 3/4	246	7.5	196	94-3200	WG T98A	4	Tim B100	HF	...	5.14-5.83
4E16	131	171	15000	3635	8/19.5D	9.00/20	Own 4E	6-3 5/16x4 3/4	246	7.5	196	94-3200	WG T98A	4	Tim E102	HF	...	6.20-6.80
4E28	131	171	15000	3730	8/19.5D	9.00/20	Own 3E	8-3 9/16x3 1/4	259	7.5	225	141-3800	WG T98A	4	Tim E102	HF	...	6.20-6.80
4E40	131	212	19000	4445	8.25/20D	10.00/20	Own 6E	8-3 9/16x3 5/8	289	7.5	260	154-3800	NP 420	4	Tim 146	HF	...	6.20-6.80
4E40B	131	212	19000	4460	8.25/20D	10.00/20	Own 6E	8-3 9/16x3 5/8	289	7.5	260	154-3800	NP 420	4	Tim 146	HF	...	6.20-6.80
Ward La Fr D-1	149	220	25000	*9500	10.00/20	11.00/20	Con T6427	6-4 5/16x4 7/8	427	5.1	340	152-2600	Ful 5A430	5	Tim Q-100	B	R	** -6.83
D-1C	149	220	29000	*9500	11.00/20	11.00/22	Con T6427	6-4 5/16x4 7/8	427	5.1	340	152-2600	Ful 5A430	5	Tim U-200	S2	R	** -7.08
D-3	149	220	29000	*10000	11.00/20	11.00/22	Con R6572	6-4 3/4x5 3/8	572	5.9	440	189-2600	Ful 5C650	5	Tim R-200	S2	R	** -7.84
D-3S	149	220	29000	*10000	11.00/20	11.00/22	Con R6602	6-4 7/8x5 3/8	602	5.9	463	198-2600	Ful 5C650	5	Tim R-200	S2	R	** -7.84
(D) D-5	149	220	35000	*12500	11.00/22	11.00/22	Cum HB600	6-4 7/8x6	672	17.0	500	150-1800	Ful 5C650	5	Tim R-200	S2	R	** -6.42
Four-Wheel Drive																		
Coleman G-55	150	160	34000	12000	11.00/20	12.00/20	Buda LO-525	6-4 1/2x5 1/2	525	6.7	400	150-2200	Fu 5A650	5	OW-289-CM	2	...	7.17-9.72
G-55	150	160	34000	12000	11.00/20	12.00/20	Wau 140GZ	6-4 5/8x5 1/2	554	6.4	451	188-2600	Fu 4A86	4	OW-289-CM	2	...	7.17-9.72
(D) D-55	150	160	34000	13000	11.00/20°	12.00/20	Cum HB600†	6-4 7/8x6	672	17.0	500	150-1800	Fu 5A650■	5	OW-289-CM	2	...	7.17-9.72
Dodge M6-W100	108	116	6000	.....	7/17.5S	7/17.5S	Own	6-3 1/4x4 5/8	230	7.9	202	120-3600	WG T85E	3	Spi 60	Hy	H	4.1 -4.88
M8-W100	108	116	6000		7/17.5S	7/17.5S	Own	8-3.91x3.31	318	8.2	290	205-	WG T85E	3	Spi 60	Hy	H	4.1 -4.88
M6-W200	116	116	8000		7/17.5S	7/17.5S	Own	6-3 1/4x4 5/8	230	7.9	202	120-3600	WG T85E	3	Own W200	Hy	H	4.1 -4.89
M8-W200	116	116	8000		8/19.5S	7/17.5	Own	8-3.91x3.31	318	8.2	290	205-	WG T85E	3	Own W200	Hy	H	4.1 -4.89
M6-W300M	126	126	9500		7.50/16	9.00/16	Own	6-3 1/4x4 5/8	230	7.9	198	113-	NP 420	4	Own W300M	HF	H	4.88-5.87
M6-W300	129	129	10000		7.50/16	9.00/16	Own	6-3.43x4.50	251	7.1	216	125-	NP 420	4	Spi 70	HF	H	4.88-5.87
M8-W300	129	129	10000		7.50/16	9.00/16	Own	8-3.91x3.31	318	8.2	292	207-				HF	H	4.88-5.87
M6-W500	156	174	20000		8/22.5	9/22.5	Own	6-3.43x3.76	265	7.1	228	130-	NP 420	4	Tim H141	HF	H	** -6.8
M8-W500	156	174	20000		8/22.5	9/22.5	Own	8-3.91x3.31	318	8.2	292	207-	NP 420	4	Tim H141	HF	H	** -6.8
Duplex L-6602-4	148	220	40000	*13300	11.00/20	12.00/20	Con R6602	6-4 7/8x5 3/8	602	6.1	465	200-2600	Fu 5C650	5	Tim 1758	2F	H	** -8.15
(D) LC-600-4	148	220	40000	*14550	11.00/20	12.00/20	Cum HRB600	6-5 1/8x6	743	16.0	540	165-1800	Fu 5C650	5	Tim 1758	2F	H	** -8.15
Fabco (c) FD201A	130	172	19000	5700	7.50/20	9.00/20	Chevrolet	6-3 3/4x3 15/16	261	7.2	220	135-4000	Chevrolet*	8	Chevrolet	Hyf	H	** -6.17
(c) FD201B	130	172	19000	5700	7.50/20	8.25/20	Ford	8-3.5x3.1	239	7.5	215	132-4200	Ford*	10	Ford	HF	H	** -6.8
(c) FD201B	130	172	19000	5700	7.50/20	8.25/20	Ford	8-3.6x3.1	256	7.5	228	140-3900	Ford*	10	Ford	HF	H	** -6.8
(c) FD251B	130	172	27000	7500	8.25/20	9.00/20	Ford	8-3.8x3.5	317	7.2	286	170-3900	Ford*	10	Ford	SF	H	7.17-7.67
(c) FD201A	132 1/2	174 1/2	17000	6100	8/22.5	10/22.5	Chevrolet	8-3 7/8x3	283	8.0	270	160-4200	Chevrolet*	8	Chevrolet	Hyf	H	** -7.20
(c) FD201C	131	173	19000	6000	8/22.5	10/22.5	GMC	8-3 15/16x3 9/16	347	7.8	317	206-4400	GMC*	8	GMC	Hyf	H	** -6.17
(c) FD251D	154	172	20000	6500	8/22.5	10/22.5	Int	6-3 9/16x4 1/2	269	6.5	227	103-2800	Int*	10	Tim F105	HF	H	** -6.80
(c) FD302B	132	192	26000	8000	10/22.5	11/22.5	Ford	8-3.8x3.6	332	7.6	328	212-3800	Ford*	10	Eat 1790	SF	H	** -7.17
Federal 200R44	145	193	22000	*7065	8.25/20	....	Her JXD	6-4x4 1/4	320	...	254	125-3200	Cla 205V	5	Tim H140	H	...	** -6.17
(D) D200R44	145	193	22000	*7485	8.25/20	....	Con TD6427	6-4 5/16x4 7/8	427	...	307	116-2400	Cla 290V	5	Tim H140	H	...	** -6.17
300R44	145	193	24000	*7370	9.00/20	....	Her JXLD	6-4x4 1/2	339	...	264	138-3000	Cla 205V	5	Tim L140	H	...	** -6.17
(D) D300R44	145	193	24000	*7945	9.00/20	....	Cum JN6B	6-4 1/8x5	401	...	290	125-2500	Cla 290V	5	Tim L140	H	...	** -6.17
400R44	145	193	29000	*10802	10.00/20	....	Con T6427	6-4 5/16x4 7/8	427	...	356	179-3000	Cla 290V	5	Tim QT140	H	...	** -7.20
(D) D400R44	145	193	29000	*10872	10.00/20	....	Cum JBS600	6-4 1/8x5	401	...	350	150-2500	Cla 290V	5	Tim QT140	H	...	** -7.20
500R44	145	193	34000	*11280	11.00/22	....	Con U6501	6-4 1/2x5 1/4	501	...	413	178-2600	Fu 5A65	5	Tim R140	H	...	** -7.20

For references and abbreviations see page 122

For Directory of the Truck Manufacturers listed above, see Table of Contents

1959 TRUCK SPECIFICATIONS—continued

MAKE AND MODEL	WHEELBASE: Minimum Standard	WHEELBASE: Maximum Standard	Gross Vehicle Weight for Normal Service	Chassis Weight (See definition)	TIRE SIZES (D-dual rear, S-single rear): Standard Front and Rear	TIRE SIZES: Maximum Authorized Tire Size (Duals unless noted)	ENGINE DETAILS: Make and Model	No. of Cylinders, Bore and Stroke	Displacement	Comp. Ratio	Torque lb. ft.	Max. Brake H.P. at R.P.M. Given	TRANSMISSION: Make and Model	Forward Speeds	REAR AXLE: Make and Model	Gear and Type	Drive and Torque	Gear Ratio Range in High
Four-Wheel Drive—Cont'd																		
Federal—Cont'd																		
(D) D500R44	145	193	34000	▲12440	11.00/22		Cum HRFB600	6-5 1/8x6	743		550	180-2000	Fu 5A65	5	Tim R140	H		** -7.20
600R44	145	193	40000	▲12332	11.00/22		Con R6602	6-4 7/8x5 3/8	602		484	232-2800	Fu 5A65	5	Tim U200	H2		** -7.20
(D) D700R44	145	193	40000	▲13890	11.00/22		Cum NHB600	6-5 1/8x6	743		535	210-2100	...8051A	5	Tim U200	H2		** -7.20
FWD •170	142	215	17000	7200	7.50/20D	10.00/20S	Int BD240	6-3 9/16x4 1/64	241	7.5	224	141-3800	WG T9	4	Own 23L	SF	H	4.86-8.98
•191	142	215	20000	7620	8.25/20D	10.00/20S	Int BD264	6-3 11/16x4 1/8	264	7.5	248	153-3800	Int T31	5	Own 23L	SF	H	4.86-8.98
•192	142	215	20000	7680	8.25/20D	10.00/20S	Int BD308	6-3 11/16x4 1/2	308	6.5	286	154-3600	Int T31	5	Own 23L	SF	H	4.86-8.98
•286	142	202	28000	8890	10.00/20D	11.00/20	Int RD450	6-4 3/8x5	451	6.5	388	182-3000	Int T62	5	Own 23	SF	H	4.86-8.98
(D) •325D	142	231	32000	11990	11.00/20D	13.00/20S	Cum JT6B	6-4 1/8x5	401	16.3	407	175-2500	Ful 5C65	5	Own 33A	SF	H	4.18-12.2
•232	142	202	23000	8100	9.00/20D	10.00/20	Int BD308	6-3 11/16x4 1/2	308	6.5	286	154-3600	Int T31	5	Own 23	SF	H	4.86-8.98
(D) •233D	142	202	23000	9000	9.00/20D	10.00/20	GMC 3-71	3-4 1/4x5	213	16.0	277	102-2100	Ful 5A430	5	Own 23	SF	H	4.86-8.98
•284	142	202	28000	8850	10.00/20D	11.00/20	Int RD372	6-4 3/8x4 1/8	372	6.5	308	165-3200	Int T51	5	Own 23	SF	H	4.86-8.98
(D) •284D	142	202	28000	9800	10.00/20D	11.00/20	GMC 4-71	4-4 1/4x5	284	17.0	375	150-2300	Ful 5C650	5	Own 23	SF	H	4.86-8.98
•285	142	202	28000	8860	10.00/20D	11.00/20	Int RD406	6-4 3/8x4 1/2	406	6.5	338	175-3200	Int T51	5	Own 23	SF	H	4.86-8.98
(D) •285D	142	202	28000	9750	10.00/20D	11.00/20	Cum JT6B	6-4 1/8x5	401	16.3	407	175-2500	Ful 5C650	5	Own 23	SF	H	4.86-8.98
•326	142	231	32000	11405	11.00/20D	13.00/20S	Int RD450	6-4 3/8x5	451	6.5	388	182-3000	Int T62	5	Own 33A	SF	H	4.18-12.2
(D) •324D	142	231	32000	12150	11.00/20D	13.00/20S	GMC 4-71	4-4 1/4x5	284	17.0	375	150-2300	Ful 5C650	5	Own 33A	SF	H	4.18-12.2
(D) 327D	142	231	32000	12930	11.00/20D	13.00/20S	Cum HR6B	6-5 1/8x6	743	15.5	550	175-1800	Ful 5C720	5	Own 33A	SF	H	4.18-12.2
•367	142	231	36000	11600	11.00/20D	13.00/20S	Int RD501	6-4 1/2x5 1/4	501	6.5	444	212-3000	Int T72	5	Own 33	SF	H	4.85-14.1
(D) 368D	142	211	36000	13100	11.00/20D	13.00/20S	Cum HRF6B	6-5 1/8x6	743	15.5	580	190-2000	Ful 5C720	5	Own 33	SF	H	4.85-14.1
408	142	211	40000	13900	12.00/20D	14.00/20S	Wau 145GK	6-5 1/4x6	779	6.2	595	216-2000	Ful 10A1120	10	Own 33	SF	H	5.71-8.53
409	142	211	40000	13970	12.00/20D	14.00/20S	Wau 145GKB	6-5 1/4x6	779	6.2	595	240-2400	Ful 10A1120	10	Own 33	SF	H	5.71-8.53
(D) 406D	142	211	40000	14630	12.00/20D	14.00/20S	GMC 6-71	6-4 1/4x5	426	16.0	570	227-2250	Ful 10A1120	10	Own 33	SF	H	5.71-8.53
(D) 409D	142	211	40000	14800	12.00/20D	14.00/20S	Cum NH220	6-5 1/8x6	743	15.5	607	220-2100	Ful 10A1120	10	Own 33	SF	H	5.71-8.53
•327	142	231	32000	11450	11.00/20D	13.00/20S	Int RD501	6-4 1/2x5 1/4	501	6.5	444	212-3000	Int T72	5	Own 33A	SF	H	4.18-12.2
Marmon-Herrington																		
104	110	118	5600	▲3300	6.50/16S	6.50/16S	Ford	6-3 5/8x3 19/32	223	8.3	207	139-4200	War T98A*	4	Ford	H1/2	H	** -3.70
104	110	118	5600	▲3425	6.50/16S	6.50/16S	Ford	8-3 3/4x3 5/16	292	7.9	269	186-4000	War T98A*	4	Ford	H1/2	H	** -3.70
504	130	154	17000	▲4964	7/22.5D	8/22.5	Ford	6-3 5/8x3 19/32	223	8.3	207	139-4200	War T98A	4	Tim D100	HF	H	** -5.83
504	130	154	17000	▲5089	7/22.5D	8/22.5	Ford	8-3 3/4x3 5/16	292	7.9	269	186-4000	War T98A	4	Tim D100	HF	H	** -5.83
504	130	154	17000	▲5089	7/22.5D	8/22.5	Ford	8-3 3/4x3 5/16	292	7.6	270	187-3800	War T98A	4	Tim D100	HF	H	** -5.83
604	130	192	21000	▲5339	8/22.5D	10/22.5	Ford	6-3 5/8x3 19/32	223	8.3	207	139-4200	War T98A	4	Tim F106	HF	H	** -6.80
604	130	192	21000	▲5464	8/22.5D	10/22.5	Ford	8-3 3/4x3 5/16	292	7.9	269	186-4000	War T98A	4	Tim F106	HF	H	** -6.80
604	130	192	21000	▲5464	8/22.5D	10/22.5	Ford	8-3 3/4x3 5/16	292	7.6	270	187-3800	War T98A	4	Tim F106	HF	H	** -6.80
704	132	192	22500	▲6753	9/22.5D	10/22.5	Ford	8-3 3/4x3 5/16	292	7.9	269	186-4000	War T98A	4	Eat 1614	HF	H	** -7.17
704	132	192	22500	▲6758	9/22.5D	10/22.5	Ford	8-3 3/4x3 5/16	292	7.6	270	187-3800	War T98A	4	Eat 1614	HF	H	** -7.17
754	132	192	24000	▲7003	9/22.5D	10/22.5	Ford	8-3 5/8x3 21/32	302	7.6	299	196-3800	Cla 250V	5	Eat 1614	HF	H	** -7.17
804	132	192	26000	▲7812	10/22.5D	11/22.5	Ford	8-3 51/64x3 21/32	332	7.6	328	212-3800	Cla 264VO	5	Eat 1790A	HF	H	** -7.17
854	132	192	27000	▲8157	10/22.5D	11/22.5	Ford	8-4 1/8x3 3/4	401	7.5	350	226-3800	Spi 4652	5	Eat 1790A	HF	H	** -7.17
C704	135	153	22500	▲6970	9/22.5D	10/22.5	Ford	8-3 3/4x3 5/16	292	7.9	269	186-4000	War T98A	4	Eat 1614	HF	H	** -7.17
C704	135	153	22500	▲6985	9/22.5D	10/22.5	Ford	8-3 3/4x3 5/16	292	7.6	270	187-3800	War T98A	4	Eat 1614	HF	H	** -7.17
C754	135	153	24000	▲7513	9/22.5D	10/22.5	Ford	8-3 5/8x3 21/32	302	7.6	299	196-3800	Cla 265V	5	Eat 1614	HF	H	** -7.17
C804	135	153	26000	▲7802	10/22.5D	11/22.5	Ford	8-3 51/64x3 21/32	332	7.6	328	212-3800	Cla 264VO	5	Eat 1790A	HF	H	** -7.17
C854	135	153	27000	▲8435	10/22.5D	11/22.5	Ford	8-4 1/8x3 3/4	401	7.5	350	226-3800	Spi 4652	5	Eat 1790A	HF	H	** -7.17
Oshkosh W-216	152		23600	8915	10/22.5		Int RD406	6-4 3/8x4 1/2	406		338	175-3200	Own MT216	5	Own R216	SF		
W-314	150		28000	9950	10.00/20		Con B6427	6-4 5/16x4 7/8	427		328	137-2600	Own MT314	5	Own R314	SF		
W-316	152		28000	9310	10/22.5		Int RD406	6-4 3/8x4 1/2	406		338	175-3200	Own MT316	5	Own R316	SF		
(D) W-316-D	152		28000	9520	10/22.5		Cum JN6B	6-4 1/8x5	401		295	130-2500	Own MT316	5	Own R316	SF		
W-416	152		30000	10060	11/22.5		Int RD406	6-4 3/8x4 1/2	406		338	175-3200	Own MT416	5	Own R416	SF		
(D) W-514-D	150		30000	10060	10.00/20		Cum JT6B	6-4 1/8x5	401		407	175-2500	Own MT514	5	Own R514	SF		
(D) W-515-D	150		34000	12800	11.00/20		Cum JT6B	6-4 1/8x5	401		407	175-2500	Own MT514	5	Own R515	SF		
W-516	152		32000	10740	12/22.5		Int RD450	6-4 3/8x5	450		388	182-3000	Own MT516	5	Own R516	SF		
W-516-DR	152		32000	11140	12/22.5		Int RD501	6-4 1/2x5 1/4	501		444	212-3000	Own MT516	5	Own R516DR	2F		
W-614	150		32000	12200	11.00/20		Con R6513	6-4 1/2x5 3/8	513		427	189-2600	Own MT614	5	Own R614	SF		
W-616	152		36000	11180	12/22.5		Int RD501	6-4 1/2x5 1/4	501		444	212-3000	Own MT616	5	Own R616	SF		
W-616-DR	152		36000	11380	12/22.5		Int RD501	6-4 1/2x5 1/4	501		444	212-3000	Own MT616	5	Own R616DR	2F		
W-814	150		36000	12600	11.00/20		Con R6572	6-4 3/4x5 3/8	572		464	210-2600	Own MT814	5	Own R814	SF		
W-824	150		36000	12800	11.00/20		Con R6572	6-4 3/4x5 3/8	572		464	210-2600	Own MT814	5	Own R824	2F		
W-815	150		36000	12600	11.00/20		Con R6602	6-4 7/8x5 3/8	602		484	218-2600	Own MT815	5	Own R815	SF		
W-825	150		36000	12800	11.00/20		Con R6602	6-4 7/8x5 3/8	602		484	218-2600	Own MT815	5	Own R825	2F		
(D) W-816	150		36000	14100	12.00/20		Cum H6B	6-4 7/8x6	672		512	160-1800	Own MT816	5	Own R816	SF		
(D) W-826	150		36000	14300	12.00/20		Cum H6B	6-4 7/8x6	672		512	160-1800	Own MT816	5	Own R826	2F		
(D) W-817	158		40000	14400	12.00/20		Cum HRF6B	6-5 1/8x6	743		580	190-2000	Own MT817	5	Own R817	SF		
(D) W-827	158		40000	14600	12.00/20		Cum HRF6B	6-5 1/8x6	743		580	190-2000	Own MT817	5	Own R827	2F		
(D) WA-906	160		42000	16000	13.00/20		Cum HRF6B	6-5 1/8x6	743		580	190-2000	Own MT906	12	Own R906	2F		
(D) WC-906	160		42000	16400	13.00/20		Cum NH220	6-5 1/8x6	743		606	220-2100	Own MT906	12	Own R906	2F		
W-2206	160		54000	19000	13.00/24		HS 6182G1	6-5 3/4x7	1091		960	332-2200	Own MT2206	10	Own R2206	2F		
(D) WA-2208	160		44000	17500	13.00/20		Cum NH220	6-5 1/8x6	743		606	220-2100	Own MT2208	12	Own R2208	2F		
(D) W-2209	160		54000	19500	13.00/24		Cum NHRS6B	6-5 1/8x6	743		865	320-2100	Own MT2209	10	Own R2209	2F		
W-2211	160		44000	16500	13.00/24		Wau 145GKB	6-5 1/4x6	779		595	240-2400	Own MT2211	12	Own R2211	2F		
W-1700-15C	160		34000	12300	12.00/20		Con R6513	6-4 1/2x5 3/8	513		427	189-2600	Own MT1700	10	Own R1700	SF		
W-1700-15CR	160		34000	12300	12.00/20		Con R6513	6-4 1/2x5 3/8	513		427	189-2600	Own MT1700	10	Own R1700DR	2F		
(D) WA-1600	236		65000	23200	11.00/24		Cum NH2206	6-5 1/8x6	743		606	220-2100	Own MT1600	12	Tim SFD4600P	2F		
50-50	122		36000	10600	10.00/20†		Con B6427	6-4 5/16x4 7/8	427		328	137-2600	Own MT50	5	Own R50	SF		
45-55	122		42000	11900	11.00/24†		Con T6427	6-4 5/16x4 7/8	427		342	169-	Own MT55	10	Own R55	2F		
(D) 45-55-JT	122		42000	12800	11.00/24†		Cum JT6B	6-4 1/8x5	401		407	175-2500	Own MT55	10	Own R55	2F		
18-34	155		52000	14700	10/22.5†		Int RD501	6-4 1/2x5 1/4	501		444	212-3000	Own MT18	10	Tim SLDD	2F		
18-38	156		56000	15600	11/22.5†		Int RD501	6-4 1/2x5 1/4	501		444	212-3000	Own MT18	10	Tim SQDD	2F		
(D) W-2100-M	160		42000	16000	13.00/20		Cum HRF6B	6-5 1/8x6	743		580	190-2000	Own MT2100	12	Own R2100	2F		
W-2206-M	160		62000	21000	14.00/24		HS 6182B1	6-5 3/4x7	1091		1070	356-2200	Own MT2206	10	Own R2206M	2F		
(D) W-2209-M	160		62000	21500	14.00/24		Cum NHRS6B	6-5 1/8x6	743		865	320-2100	Own MT2209	10	Own R2209M	2F		
(D) W-2500			90000	31500	16.00/25		Cum NHRS6B	6-5 1/8x6	743		865	320-2100	All TG602	3	Own R2500	2F		
W-2501			90000	31500	16.00/25		HS 6182R1	6-5 3/4x7	1091		1070	356-2200	All TG602	3	Own R2500	2F		
(D) W-2800			120000		18.00/25		Cum NHRS6B	6-5 1/8x6	743		865	320-2100	All TG602	3	Own R2800	PF		
W-2801			120000		18.00/25		HS 6182B1	6-5 3/4x7	1091		1070	356-2200	All TG602	3	Own R2800	PF		
Studebaker 4E2D	112	122	5400	2875	6.00/16S	6.50/16S	Own 3E	8-3 9/16x3 1/4	259	7.5	225	141-3800	WG T98A	4	Spi 2211	H1/2		** -4.89
4E3D	112	122	5400	2800	6.00/16S	6.50/16S	Own 4E	6-3 5/16x4 3/8	246	7.5	196	94-3200	WG T98A	4	Spi 2211	H1/2		** -4.89
4E6D	112	122	5400	2800	7.10/15S	6.50/16S	Own 4E	6-3 5/16x4 3/8	246	7.5	196	94-3200	WG T98A	4	Spi 2211	H1/2		** -4.89

For references and abbreviations see page 122

For Directory of the Truck Manufacturers listed above, see Table of Contents

1959 TRUCK SPECIFICATIONS—continued

MAKE AND MODEL	WHEELBASE		Gross Vehicle Weight for Normal Service	Chassis Weight (See definition)	TIRE SIZES (D-dual rear, S-single rear)		ENGINE DETAILS						TRANSMISSION		REAR AXLE			
	Minimum Standard	Maximum Standard			Standard Front and Rear	Maximum Authorized Tire Size (Duals unless noted)	Make and Model	No. of Cylinders, Bore and Stroke	Displacement	Comp. Ratio	Torque lb. ft.	Max. Brake H.P. at R.P.M. Given	Make and Model	Forward Speeds	Make and Model	Gear and Type	Drive and Torque	Gear Ratio Range in High
Four-Wheel Drive—Cont'd																		
Studebaker—Cont'd 4E7D	112	122	5400	2875	7.10/15S	6.50/16S	Own 3E	8-3 9/16x3 1/4	259	7.5	225	141-3800	WG T98A	4	Spi 2211	H 1/2	...	** -4.89
4E11D	112	122	7400	2985	7.00/16S	7.50/17S	Own 4E	6-3 5/16x4 3/4	246	7.5	196	94-3200	WG T98A	4	Spi 60	HF	...	** -4.88
4E12D	112	122	7400	3070	7.00/16S	7.50/17S	Own 3E	8-3 9/16x3 1/4	259	7.5	225	141-3800	WG T98A	4	Spi 60	HF	...	** -4.88
4E13D	131	131	9400	3635	7.00/17S	7.50/16	Own 3E	8-3 9/16x3 1/4	259	7.5	225	141-3800	WG T98A	4	Tim B100	HF	...	** -5.14
4E14D	131	131	9400	3550	7.00/17S	7.50/16	Own 4E	6-3 5/16x4 3/4	246	7.5	196	94-3200	WG T98A	4	Tim B100	HF	...	** -5.14
Walter (c.f.) FZM	126	150	24000	9000	12.00/20S		Wau MZA	6-4 1/4x4 3/4	404	5.6	290	125-2600	Own FJN	6	Own MS	2	H	** 8.00
(c.f.) AEB	126	150	36000	13000	12.00/24S		Wau 140GZ	6-4 5/8x5 1/2	554	6.2	440	165-2250	Own FC	6	Own FCC	2	H	** 9.00
(c.f.) AGB	138	162	36000	14000	12.00/24S		Wau 145GKB	6-5 1/4x6	779	6.2	585	240-2400	Own FA	6	Own FCC	2	H	** 9.00
(c.f.) AGR	138	162	42000	15000	12.00/24D		Wau 145GKB	6-5 1/4x6	779	6.2	585	240-2400	Own FA	6	Own FCR	2	H	** 9.00
Ward La France FD1			35000	^11500	11.00/22	11.00/22	Cont 6513	6-4 1/2x5 3/8	513	5.9	405	180-2800	Ful 5A620	5	Tim R462W	S2	R	** 8.15
(D) FD2			35000	^12000	11.00/24	11.00/24	Cum HB600	6-5 1/8x6	672	17.0	500	150-1800	Ful 5A920	5	Tim R462W	S2	R	** 8.15
Willys F4-134-4x4	104 1/2	104 1/2	4500	1850	7.00/15S	7.00/15S	Own	4-3 1/8x4 3/8	134	6.9	114	72-4000	WG T90C	3	Spi 44	H 1/2	H	** 5.38
F4-134-4x2	104 1/2	104 1/2	4500	1701	6.70/15S	6.70/15S	Own	4-3 1/8x4 3/8	134	7.4	114	75-4000	WG T96*	3	Spi 44	H 1/2	H	** 4.89
F4-134-4WD	118	118	6000	2016	7.00/16S	7.00/16S	Own	4-3 1/8x4 3/8	134	6.9	114	72-4000	WG T90C	3	Spi 53-2	H 1/2	H	** 5.38
L6-226-4x4	104 1/2	104 1/2	4500	1963	7.00/15S	7.00/15S	Own	6-3 5/16x4 3/8	226	6.9	190	105-3600	WG T90J	3	Spi 44	H 1/2	H	** -4.27
L6-226-4x2	104 1/2	104 1/2	4500	1814	6.70/15S	6.70/15S	Own	6-3 5/16x4 3/8	226	6.9	190	105-3600	WG T86	3	Spi 44	H 1/2	H	4.27-4.89
L6-226-4WD	118	118	6000	2127	7.00/16S	7.00/16S	Own	6-3 5/16x4 3/8	226	6.9	190	105-3600	WG T90J	3	Spi 53	H 1/2	H	** -4.88
CJ-3B	80 1/16	80 1/16	3500	1725	6.00/16S	6.00/16S	Own	4-3 1/8x4 3/8	134	6.9	114	72-4000	WG T90C	3	Spi 44-2	H 1/2	H	** 5.38
CJ-5	81	81	3750	1756	6.00/16S	6.00/16S	Own	4-3 1/8x4 3/8	134	6.9	114	72-4000	WG T90C	3	Spi 44-2	H 1/2	H	** 5.38
CJ-6	101	101	3900	1805	6.00/16S	6.00/16S	Own	4-3 1/8x4 3/8	134	6.9	114	72-4000	WG T90C	3	Spi 44-2	H 1/2	H	** 5.38
DJ-3A	80 1/16	80 1/16	2600	1352	6.40/15S	6.40/15S	Own	4-3 1/8x4 3/8	134	6.5	105	60-4000	WG T96	3	Spi 23	H 1/2	H	** 4.56
FC-150	81	81	5000	2087	7.00/15S	7.00/15S	Own	4-3 1/8x4 3/8	134	6.9	114	72-4000	WG T90A	3	Spi 44-1	H 1/2	H	** 5.38
FC-170	103 3/8	103 3/8	7000	2168	7.00/16S	7.00/16S	Own	6-3 5/16x4 3/8	226	6.9	190	105-3600	WG T90A	3	Spi 53	H 1/2	H	** 4.88
Six-Wheelers																		
Diamond T 723JT	133	211	29500	9800	9.00/20	11.00/20	Cum JT6B	6-4 1/8x5	401		405	175-2500	Fu 5A650	5	Eat 18803			
(D) 723CJT	111	189	29500	9450	9.00/20	11.00/20	Cum JT6B	6-4 1/8x5	401		405	175-2500	Fu 5A650	5	Eat 18803			
831	145	211	30000	9300	10.00/20	11.00/22	HS 590	6-5x5	590		501	239-2800	Spi 6452	5	Eat 18803	S		Opt
(D) 921R	145	211	31500	11700	9.00/20D	11.00/22	Cum HRF6	6-5 1/8x6	743		579	190-2000	Fu 10B1120	10	Tim R140P			
(D) 921N	145	211	31500	11800	9.00/20D	11.00/22	Cum NH220	6-5 1/8x6	743		604	220-2100	Fu 10B1120	10	Tim R140P			
(D) 921CR	114	190	31500	11500	10.00/20D	11.00/20	Cum HRF6	6-5 1/8x6	743		579	190-2000	Fu 5C720	5	Eat 1911			
(D) 921CN	114	190	31500	11600	10.00/20D	11.00/20	Cum NH220	6-5 1/8x6	743		604	220-2100	Fu 5C720	5	Eat 1911			
(D) 923	133	213	30000	10600	10.00/20	11.00/24	Cum NH180	6-4 7/8x6	672		504	180-2100	Fu 5A650	5	Eat 18803	S		
(D) 923C	114	190	30000		10.00/20		Cum NH180	6-4 7/8x6	672		504	180-2100	Spi 6453A	5	Eat 18803			Opt
(D) 921NT	133	213	31500	11300	10.00/20	11.00/24	Cum NTO6	6-5 1/8x6	743		698	262-	Fu 10B1120	10	Tim R140P	Hy		Opt
(D) 921CNT	114	190	31500	11300	10.00/20	11.00/20	Cum NTO6	6-5 1/8x6	743		698	262-	Fu 10B1120	10	Tim R140P	Hy		Opt
Dodge T700	141	189	35000		8/22.5	10/22.5	Own	8-3 15/16x3 5/8	354	7.5	319	218-3900	Cla 265V	5	Tim SDHD	Hy	T	6.8 -7.8
T800-800 H.D.	144	192	37000		9/22.5	10/22.5	Own	8-3 15/16x3 5/8	354	7.5	340	224-3900	Cla 265V	5	Tim SFHD	Hy	T	6.8 -7.8
T900	144	192	49000		11/22.5	12/22.5	Own	8-3 15/16x3 5/8	354	7.5	360	234-3900	Cla 300	5	Tim SQHD	Hy	T	7.8 -8.6
Duplex TH6	162	220	30000	9180	8.25/20	9.00/20	Her JXD	6-4x4 1/4	320	6.2	240	113-3000	Fu 5B33‡	10	Tim SBD1055	BF	L	** 6.16
RH6	160	208	40000	11500	10.00/20	11.00/20	Con B6427	6-4 7/16x4 5/8	427	6.6	325	141-2600	Fu 5A43	5	Tim SD3010	2F	R	8.27-....
(D) L6	172	208	45000	15000	11.00/20	12.00/20	Cum HB600	6-4 7/8x6	672	17.0	495	150-1800	Fu 5A920	5	Tim SD454	SF2	L	6.8 -8.15
Fabco (c) FD201A	130	Opt	30000	10500	8.25/20	9.00/20	Chevrolet	6-3 3/4x3 15/16	261	7.2	220	135-4000	Chevrolet*	8	Chevrolet	HyF	H	** -6.17
(c) FD201B	130	Opt	30000	10500	8.25/20	9.00/20	Ford	8-3.5x3.1	239	7.5	215	132-4000	Ford*	10	Ford	HF	H	** -6.8
(c) FD201B	130	Opt	30000	10500	8.25/20	9.00/20	Ford	8-3.6x3.1	256	7.5	228	140-3000	Ford*	10	Ford	HF	H	** -6.8
(c) FD251B	130	Opt	40000	13000	8.25/20	9.00/20	Ford	8-3.8x3.5	317	7.2	286	170-3900	Ford*	10	Ford	SF	H	7.17-7.67
(c) FD201D	154	190	27000	8700	8/22.5	10/22.5	Int	6-3 13/16x4 1/8	282	6.5	251	137-3600	Int*	10	Eat	SF	H	** -6.70
WT	150	150	30000	10600	9.00/20	9.00/20	Ford	8-3.8x3.6	332	7.6	328	212-3800	Clark**	30	Tim F105	HF	R	** -6.80
WT	150	150	30000	10600	9.00/20	9.00/20	GMC	6-4x4	302	7.5	268	160-3800	Clark**	30	Tim F105	HF	R	** -6.80
Federal 200R66	157	193	28000	^8150	8.25/20		Her JXD	6-4x4 1/4	320		254	125-3200	Cla 205V	5	Tim SPHD	H		** -7.20
(D) D200R66	157	193	28000	^8570	8.25/20		TD 6427	6-4 7/16x4 5/8	427		307	116-2400	Cla 290V	5	Tim SDHD	H		** -6.17
300R66	157	193	34000	^8554	9.00/20		Her JXLD	6-4x4 1/2	339		264	138-3200	Cla 205V	5	Tim SFHD	H		** 6.17
(D) D300R66	157	193	34000	^9129	9.00/20		Cum JN6B	6-4 1/8x5	401		290	125-2500	Cla 290V	5	Tim SFHD	H		** -6.17
400R66	157	193	42000	^12377	10.00/20		Con T6427	6-4 7/16x4 5/8	427		356	179-3000	Cla 290V	5	Tim SLHD	H		** -7.20
(D) D400R66	157	193	42000	^12677	10.00/20		Cum JBS600	6-4 1/8x5	401		350	150-2500	Cla 290V	5	Tim SLHD	H		** 7.20
500R66	157	193	49000	^14400	11.00/22		Con U6501	6-4 1/2x5 1/4	501		413	178-2600	Cla 5A65	5	Tim SQDD	H		** 7.20
(D) D500R66	157	193	49000	^15400	11.00/22		Cum HRFB600	6-5 1/8x6	743		550	180-2000	5A65	5	..SQDD	H		** 7.20
600R66	157	193	61000	^16132	11.00/22		Con R6602	6-4 7/8x5 3/8	602		484	232-2800	5A65	5	..SFDD	H2		** 8.07
(D) D700R66	157	193	61000	^18380	11.00/22		Cum NHB600	6-5 1/8x6	743		535	210-2100	8051A	5	..SFDD4600	H2		** 8.07
FWD 6-366	162	211	36000	12300	8.25/20D	10.00/20	Int RD450	6-4 3/8x5	451	6.5	388	182-3000	Int T72	5	Own 6-23	SF	T	4.7 -11.5
(D) 6-364D	162	211	36000	13200	8.25/20D	10.00/20	GMC 4-71	4-4 1/4x5	284	17.0	375	150-2300	Ful 5C65	5	Own 6-23	SF	T	4.7 -11.5
(D) 6-368D	184	211	36000	13980	8.25/20D	10.00/20	Cum HRF6B	6-5 1/8x6	743	15.5	580	190-2000	Ful 5C72	5	Own 6-23	SF	T	4.7 -11.5
6 407	162	211	40000	12400	9.00/20D	10.00/20	Int RD501	6-4 1/2x5 1/4	501	6.5	444	212-3000	Int T70	5	Own 6-23	SF	T	4.7 -11.5
(D) 6-406D	184	233	40000	14250	9.00/20D	10.00/20	GMC 6-71	6-4 1/4x5	426	16.0	570	227-2250	Ful 5C72	5	Own 6-23	SF	T	4.7 -11.5
(D) 6-409D	184	233	40000	15150	9.00/20D	10.00/20	Cum NH220	6-5 1/8x6	743	15.5	607	220-2100	Ful 5C72	5	Own 6-23	SF	T	4.7 -11.5
6-609	192	216	60000	18090	12.00/20D	13.00/20	Wau 145GKB	6-5 1/4x6	779	6.2	595	240-2400	Ful 10A1120	10	Own 6-33	SF	T	5.7 -8.59
(D) 6-606D	192	216	60000	18820	12.00/20D	13.00/20	GMC 6-71	6-4 1/4x5	426	16.0	570	227-2250	Ful 10A1120	10	Own 6-33	SF	T	5.7 -8.59
(D) 6-609D	192	216	60000	18900	12.00/20D	13.00/20	Cum NH220	6-5 1/8x6	743	15.5	607	220-2100	Ful 10A1120	10	Own 6-33	SF	T	5.7 -8.59
6-457	162	211	45000	13550	10.00/20D	11.00/20	Int RD501	6-4 1/2x5 1/4	501	6.5	444	212-3000	Int T70	5	Own 6-23	SF	T	4.7 -11.5
(D) 6-456D	184	233	45000	15270	10.00/20D	11.00/20	GMC 6-71	6-4 1/4x5	426	16.0	570	227-2250	Ful 5C72	5	Own 6-23	SF	T	4.7 -11.5
(D) 6-459D	184	233	45000	15350	10.00/20D	11.00/20	Cum NH220	6-5 1/8x6	743	15.5	607	220-2100	Ful 5C72	5	Own 6-23	SF	T	4.7 -11.5
6-487	162	211	48000	14000	10.00/20D	11.00/20	Int RD501	6-4 1/2x5 1/4	501	6.5	444	212-3000	Int T70	5	Own 6-33AR	SF	T	4.7 -11.5
(D) 6-486D	184	233	48000	15720	10.00/20D	11.00/20	GMC 6-71	6-4 1/4x5	426	16.0	570	227-2250	Ful 5C72	5	Own 6-33AR	SF	T	4.7- 11.5
(D) 6-489D	184	233	48000	15800	10.00/20D	11.00/20	Cum NH220	6-5 1/8x6	743	15.5	607	220-2100	Ful 5C72	5	Own 6-33AR	SF	T	4.7 -11.5
6-607	178	233	60000	16600	12.00/20D	13.00/20	Int RD501	6-4 1/2x5 1/4	501	6.5	444	212-3000	Ful 10FA65	10	Own 6-33	SF	T	5.7 -8.59
6-332	160	211	33000	11400	8.25/20D	9.00/20	Int BD308	6-3 11/16x4 13/16	308	6.5	286	154-3600	Int T30	5	Own 6-23L	SF	T	4.7 -11.5
6-354	160	211	35000	11500	8.25/20D	9.00/20	Int RD372	6-4 3/8x4 1/8	372	6.5	308	165-3200	Int T60	5	Own 6-23L	SF	T	4.7 -11.5
6 355	160	211	35000	11510	8.25/20D	9.00/20	Int RD406	6-4 3/8x4 1/2	406	6.5	308	175-3200	Int T60	5	Own 6-23L	SF	T	4.7 -11.5
(D) 6 365D	162	211	36000	13050	8.25/20D	10.00/20	Cum JT6B	6-4 1/8x5	401	16.3	407	175-2500	Ful 5C65	5	Own 6-23	SF	T	4.7 -11.5
6-467	162	211	46000	13650	10.00/20D	11.00/20	Int RD501	6-4 1/2x5 1/4	501	6.5	444	212-3000	Int T70	5	Own 6-33AR	SF	T	4.7 -11.5
(D) 6-466D	184	233	46000	15370	10.00/20D	11.00/20	GMC 6-71	6-4 1/4x5	426	16.0	570	227-2250	Ful 5C72	5	Own 6-33AR	SF	T	4.7 -11.5

For references and abbreviations see page 122

For Directory of the Truck Manufacturers listed above, see Table of Contents

1959 TRUCK SPECIFICATIONS—concluded

MAKE AND MODEL	WHEEL-BASE: Minimum Standard	WHEEL-BASE: Maximum Standard	Gross Vehicle Weight for Normal Service	Chassis Weight (See definition)	TIRE SIZES (D-dual rear, S-single rear): Standard Front and Rear	TIRE SIZES: Maximum Authorized Tire Size (Duals unless noted)	ENGINE DETAILS: Make and Model	No. of Cylinders, Bore and Stroke	Displacement	Comp. Ratio	Torque lb. ft.	Max. Brake H.P. at R.P.M. Given	TRANSMISSION: Make and Model	Forward Speeds	REAR AXLE: Make and Model	Gear and Type	Drive and Torque	Gear Ratio Range in High
Six-Wheelers—Cont'd																		
FWD Cont'd																		
(D) 6-469D	184	233	46000	15450	10.00/20D	11.00/20	Cum NH220	6-5⅛x6	743	15.5	607	220-2100	Ful 5C72	5	Own 6-33AR	SF	T	4.7-11.5
86-707	166		70000	17400	11.00/20D		Int RD501	6-4½x5¼	501	6.5	444	212-3000	Int T70	5	Own 6-33AR	SF	T	4.7-11.5
Marmon-Herr.																		
T756	156	192	37000	10298	10/22.5D	10/22.5	Ford	8-3[illegible]x3[illegible]	332	7.6	328	212-3800	Cla 265	5	Tim SFHD	SF	H	**-7.20
T806	156	192	43000	10838	11/22.5D	11/22.5	Ford	8-3[illegible]x3[illegible]	332	7.6	328	212-3800	Cla 265V	5	Tim SLHD	SF	H	**-7.20
Oshkosh W-825-6X6	178		45000	17500	11.00/20		Con R6602	6-4⅞x5⅜	602		484	218-2600	Own MT825	10	Tim SFD3020P	2F		
(D) W-826-6X6	178		45000	19000	11.00/20		Cum H6B	6-4⅞x6	672		512	160-1800	Own MT826	10	Tim SFD3020P	2F		
(D) WA-906-6X6	208		65000	23200	11.00/24		Cum HRF6B	6-5⅛x6	743		580	190-2000	Own MT906	12	Tim SFD4600P	2F		
Peterbilt (D) 350	193	Opt	36000		10.00/20D	11.00/22	Cum NHB600	6-5⅛x6	743	17.0	500	200-2100	Spi 8041	12	Tim SW-3456	WF	R	6.16-6.80
(D) 360	198	Opt	36000		10.00/20D	11.00/22	Cum NHB600	6-5⅛x6	743	17.0	500	200-2100	Spi 8041	12	Tim SW-459	WF	R	6.16-6.80
(D) 381	194	Opt	44000		10.00/20D	11.00/22	Cum NHB600	6-5⅛x6	743	17.0	500	200-2100	Spi 8041	12	Tim SFD4600	2F	R	**-10.16
(D) 350 (coe)	135	Opt	36000		10.00/20	11.00/22	Cum NHB600	6-5⅛x6	743	17.0	500	200-2100	Spi 8041	12	SW 3456	WF	R	6.16-6.80
(D) 351 (coe)	190	Opt	36000	13200	10.00/20	11.00/22	Cum NHB600	6-5⅛x6	743	17.0	500	200-2100	Spi 8045	12	Tim SW3458			6.16-7.35
(D) 360 (coe)	135	Opt	36000		10.00/20	11.00/22	Cum NHB600	6-5⅛x6	743	17.0	500	200-2100	Spi 8041	12	SW 459	WF	R	6.16-6.80
Reo C-330	150		35000	▲10090	9/22.5	10/22.5	Own OA145†	6-4⅛x4⅛	331	6.73	270	145-3200	Cla 205V	5	Eat 28M	SF	T	7.79-
C-332	150		37000	▲10160	9/22.5	10/22.5	Own OA145†	6-4⅛x4⅛	331	6.73	270	145-3200	Cla 205V	5	Eat 28M	SF	T	7.79-
C-430	150		42000	▲10750	10/22.5	11/22.5	Own OH170^	6-4⅛x4⅛	331	7.5	297	170-3400	Cla 290V	5	Tim SLHD	HF	T	7.8-8.6
C-432	150		43000	▲11040	10/22.5	12/22.5	Own OH170^	6-4⅛x4⅛	331	7.5	297	170-3400	Cla 290V	5	Tim SLHD	HF	T	7.8-8.6
C-436	150		47000	▲11360	10/22.5	12/22.5	Own OH170^	6-4⅛x4⅛	331	7.5	297	170-3400	Cla 290V	5	Tim SLHD	HF	T	7.8-8.6
(6X6) C-440	150		43000	▲12575	10/22.5	11/22.5	Own OH170^	6-4⅛x4⅛	331	7.5	297	170-3400	Cla 290V	5	Tim SLD	HF2	T	7.67-
(6X6) C-442	150		50000	▲13570	10/22.5	12/22.5	Own OH170^	6-4⅛x4⅛	331	7.5	297	170-3400	Cla 290V	5	Tim SQD	HF2	T	7.54-
C-530	155		46000	▲12287	11/22.5	12/24.5	Own OH170■	6-4⅛x4⅛	331	7.5	297	170-3400	Cla 290V	5	Eat 36M	SF	T	7.62-8.49
C-536	155		50000	▲12567	11/22.5	12/24.5	Own OH170■	6-4⅛x4⅛	331	7.5	297	170-3400	Cla 290V	5	Eat 36M	SF	T	7.62-8.49
A-630	191		42000	▲11510	10/22.5	11/22.5	Own OV207▼	8-3⅞x4⅛	390	7.3	354	207-3400	Fu 5A65	5	Tim SLHD	HF	T	6.16-8.6
A-633	145		42000	▲11825	10/22.5	11/22.5	Own OV207▼	8-3⅞x4⅛	390	7.3	354	207-3400	Fu R46	5	Tim SLHD	HF	T	6.16-8.6
(D) A-633-D	145		42000	▲12430	10/22.5	11/22.5	Cum JT6B	6-4⅛x5	401	16.3	412	175-2500	Fu R46	8	Tim SLHD	HF	T	5.28-6.83
(c.o.e.) AC-633	130		42000	▲12190	10/22.5	11/22.5	Own OV207▼	8-3⅞x4⅛	390	7.3	354	207-3400	Fu R46	8	Tim SLHD	HF	T	6.16-8.6
(D)(c.o.e.) AC-633-D	136		42000	▲12990	10/22.5	11/22.5	Cum JT6B	6-4⅛x5	401	16.3	412	175-2500	Fu R46	8	Tim SLHD	HF	T	5.28-6.83
A-730	151		46000	▲12755	11/22.5	12/24.5	Own OV207▼	8-3⅞x4⅛	390	7.3	354	207-3400	Fu 5A65	5	Eat 38DP	SF	T	7.62-8.49
A-733	145		45000	▲13005	11/22.5	12/24.5	Own OV207▼	8-3⅞x4⅛	390	7.3	354	207-3400	Fu R46	8	Eat 38DS	SF	T	7.62-8.49
AC-733	130		45000	▲13370	11/22.5	12/24.5	Own OV207▼	8-3⅞x4⅛	390	7.3	354	207-3400	Fu R46	8	Eat 38DS	SF	T	7.62-8.49
(D) B-630-D	179¾		42000	▲13835	10/22.5	11/22.5	Cum NH180°	6-4⅞x6	672	15.5	475	180-2100	Spi 6452	5	Tim SLHD	HF	T	5.28-6.16
(D) B-632-D	179¾		43000	▲13895	10/22.5	11/22.5	Cum NH180°	6-4⅞x6	672	15.5	475	180-2100	Spi 6452	5	Tim SLHD	HF	T	5.28-6.16
(D) B-633-D	179¾		42000	▲14190	10/22.5	11/22.5	Cum NH180°	6-4⅞x6	672	15.5	475	180-2100	Spi 6452	5	Tim SLHD	HF	T	5.28-6.16
(D)(c.o.e.) BCL-633-D	154		43000	▲14400	10/22.5	11/22.5	Cum NH180°	6-4⅞x6	672	15.5	475	180-2100	Fu R630D	10	Tim SLHD	HF	T	5.28-6.16
(D) B-730-D	188¾		48000	▲15160	11/22.5	12/24.5	Cum NH180°	6-4⅞x6	672	15.5	475	180-2100	Fu 5C72	5	Eat 38DS	SF	T	4.87-7.17
(D) B-732-D	188¾		52000	▲15360	11/22.5	12/24.5	Cum NH180°	6-4⅞x6	672	15.5	475	180-2100	Fu 5C72	5	Eat 38DS	SF	T	4.87-7.17
(D) B-733-D	188¾		48000	▲15515	11/22.5	12/24.5	Cum NH180°	6-4⅞x6	672	15.5	475	180-2100	Fu 5C72	5	Eat 38DS	SF	T	4.87-7.17
(D)(c.o.e.) BCL-733-D	160		48000	▲15425	11/22.5	12/24.5	Cum NH180°	6-4⅞x6	672	15.5	475	180-2100	Fu R630D	10	Eat 38DS	SF	T	4.87-7.17
(D) B-830-D-OH	188¾		60000	▲17875	11.00/24	12.00/24	Cum NH180°	6-4⅞x6	672	15.5	475	180-2100	Fu 5C72	5	Eat 42M	HF2	T	7.08-9.27
Truckstell																		
(C) F600 4R	155	221	28000	7960♠	8/22.5	9/22.5	Ford	6 3.62x3	223	7.8	202	133-4000	Ford♦♦	12	Ford	HF	L	**-6.8
(C) F700 4R	157	225	32000	8980♠	8/22.5	9/22.5	Ford	3 3.62x3.3	272	7.6	247	158-3800	Ford♦♦	12	Ford	HF	L	**-7.2
(C) F750 4R	157	225	34000	9350♠	9/22.5	10/22.5	Ford	8 3.62x3.3	302	7.5	279	175-3800	Ford♦♦	15	Ford	HF	L	**-7.2
(C) F800 4R	157	225	40000	10170♠	10/22.5	11/22.5	Ford	8 3.8x3.7	332	7.5	306	190-3800	Ford♦♦	15	Ford	SF	L	**-7.2
(C) F900 4R	157	225	48000	11640♠	11/22.5	11/22.5	Ford	8 3.8x3.7	332	7.5	306	190-3800	Ford♦♦	15	Ford	SF	L	**-7.67
(C) C5403 4R	138	205	28000	7650♠	8/22.5	9/22.5	Chev.	8 3.75x3	265	7.5	249	155-4200	Chev.♦♦	12	Chev.	HF	L	**-6.17
(C) C6103 4R	155	225	32000	7800♠	8/22.5	9/22.5	Chev.	6 3.56x3.9	236	8.0	210	140-4200	Chev.♦♦	12	Chev.	HF	L	**-6.17
(C) C7103 4R	138	205	34000	81/0♠	8/22.5	10/22.6	Chev.	8 3.75x3	265	7.5	249	155-4200	Chev.♦♦	12	Chev.	HF	L	**-6.17
(C) C8103 4R	158	225	34000	8350♠	8/22.5	10/22.5	Chev.	8 3.75x3	265	7.5	249	155-4200	Chev.♦♦	12	Chev.	HF	L	**-6.17
(C) C9103 4R	138	205	48000	10250♠	9/22.5	11/22.5	Chev.	8 4x3.19	322	7.7	310	195-4000	Chev.♦♦	15	Chev.	SF	L	**-7.17
(C) C10103 4R	158	225	48000	11000♠	9/22.5	11/22.5	Chev.	8 4x3.19	322	7.7	310	195-4000	Chev.♦♦	15	Chev.	SF	L	**-7.17
Ward La Fr. DIT‡	180	220	39500		10.00/20	11.00/20	Con T6427	6-4⅜x4¾	427		340	152-2600	Fu 5A43♠♠	15	Tim SD3010P	2F	L	**-8.27
D3T▲▲	180	220	39500		10.00/20	11.00/20	Con R6572	6-4¾x5⅜	572		440	198-2600	Fu 5C65♠♠	15	Tim SD3010P	2F	L	**-7.50
D3ST▲▲	180	220	39500		10.00/20	11.00/20	Con R6602	6-4⅞x5⅜	602		463	206-2600	Fu 5C65♠♠	15	Tim SD3010P	2F	L	**-7.50
(D) D5T▲▲	180	220	42000		11.00/20	11.00/20	Cum HB600	6-4⅞x6	672		500	150-1800	Fu 5C72♠♠	15	Tim SD3010P	2F	L	**-6.84
(D) D5RT▲▲	180	220	42000		11.00/20	11.00/20	Cum HR600	6-5⅛x6	743		540	165-1800	Fu 5C72♠♠	15	Tim SD3010P	2F	L	**-6.84
(D) D5NT▲▲	180	220	42000		11.00/20	11.00/20	Cum NHB600	6-5⅛x6	743		540	200-2100	Fu 5C72♠♠	15	T SW3012PA	WF	L	**-6.17
White-Freightliner																		
(D) WF7564T	156	248		12625	11/22.5		Cum NHB	6-5⅛x6	743	13.0	575	220-2100	Fu R36	10	TDA SQHD	WF	H	**-6¼
(D) WF6342T	116	150		9995	11/22.5		Cum NHB	6-5⅛x6	743	13.0	575	220-2100	SP 8041	8	TDA R330	SfD	H	4.77-6.38
(D) WF6344T	116	150		11030	11/22.5		Cum NHB	6-5⅛x6	743	12.0	575	220-2100	Fu R96	10	TDA R230	SfD	H	**-5.54
(D) WF6364	196	231		12985	11/22.5		Cum NHB	6-5⅛x6	743	13.0	575	220-2100	SP 8241	12	TDA SQHD	WF	H	**-6.17

For references and abbreviations see page 122

For Directory of the Truck Manufacturers listed above, see Table of Contents

Shipments of Motor Vehicles by Types of Transportation

From Factories and Assembly Plants in U.S., including Exports

As reported by the Automobile Manufacturers Association

Year	Shipments by: Railroad Carloads	Overland Trailers	Boat	Year	Shipments by: Railroad Carloads	Overland Trailers	Boat
1938	224,955	1,330,334	151,632	1950	389,556	5,776,706	585,356
1939	313,204	1,966,629	208,549	1951	303,502	4,966,709	468,716
1940	402,819	2,618,484	274,431	1952	192,027	4,321,273	377,424
1941	448,043	2,756,974	287,703	1953	246,288	5,712,360	496,375
1946	290,974	1,661,637	169,664	1954	166,349	5,314,842	370,044
1947	378,861	2,822,773	286,188	1955	250,456	7,549,286	478,911
1948	356,477	3,289,641	331,815	1956	161,000	5,859,768	300,805
1949	372,739	4,167,269	490,273	1957	123,773	6,159,743	399,390

INTEGRAL BUSES ... 1959

CITY AND INTERCITY

Line Number	Bus Make and Model	GENERAL: Passenger Rating	Type (City Service, Parlor, etc.)	Standard Wheelbase (In.)	Overall Length (In.)—Bumper to Bumper	Inside Length (In.)—Passenger Compartment	Tread (In.)—Front and Rear	Complete Vehicle Weight—Dry (Lb.)	Standard Tire Size (In.)—Front and Rear	ENGINE: Make and Model	Cycle and Fuel	Location	Number of Cylinders—Bore and Stroke (In.)	Displacement (Cu. In.)	Rated Horsepower (A.M.A.)	Maximum Brake Hp. at Governed R.P.M.	Maximum Net Torque (Lb. Ft.) at Specified R.P.M.	Compression Ratio—to 1	Compression Pressure—(Lb.) at Specified R.P.M.	Valve Arrangement	Oiling System: Pressure to—
1	Crown A-501-10	37-41	IC	200½	384	353½	80⅛-72	18500	10.00/20	Int. 501	4-G	UF	6-4½x5¼	501	48.6	212-3000	445-1400	6.50	....	I	acd
2	A-590-10	33-41	IC	200½	384	353½	80⅛-72	18500	10.00/20	HS 590BH1	4-G	UF	6-5x5	590	60.0	232-2800	490-1600	6.70	....	I	acdef
3	A-501-11	37-45	IC	232	419½	388	80⅛-72	19200	11.00/20	Int. 501	4-G	UF	6-4½x5½	501	48.6	212-3000	445-1400	6.50	....	I	acd
4	A-590-11	37-45	IC	232	419½	388	80⅛-72	19200	11.00/20	HS 590BH1	4-G	UF	6-5x5	590	60.0	232-2800	490-1600	6.70	....	I	acdef
5	A-779-11	37-45	IC	232	419½	388	80⅛-72	20500	11.00/22	HS 779	4-G	UF	6-5¼x6	779	29.8	254-2400	618-1600	6.10	....	I	acdef
6	AD-743-11	37-45	IC	232	419½	388	80⅛-72	21200	11.00/22	Cum NHHB600	4-D	UF	6-5⅛x6	743	27.0	210-2100	570-1600	15.5	....	I	abcd
7	AD-743-T-11	37-45	P	232	419½	388	80⅛-72	21200	11.00/22	Cum NHHT6B	4-D	UF	6-5⅛x6	743	....	250-2100	690-1500	15.5	....	I	abcd
8	AD-743-11	49	P	232	480	450	80⅛-72	......	11.00/22	Cum NHHB600	4-D	UF	6-5⅛x6	743	27.0	220-2100	570-1600	15.5	....	I	abcd
9	Flxible 218WA1	29	IC	218	410¾	300	80⅛-69¾	16100	9.00/20	Whi WA390	4-G	R	6-4⅜x5	531	54.2	200-2900	440-1400	6.40	....	L	abcdf
10	218GM1	29	IC	218	410¾	300	80⅛-69¾	......	9.00/20	GM 4-71	2-D	R	4-4¼x5	284	28.9	150-2100	387-1600	16.0	....	I	abcd
11	236-DD-1	41	P	236	.....	401½	80⅛-71½	......	....	GM 6174E	2-D	R	6-4¼x5	426	....	172-2000	496-1200	17.0	....	...	abcd
12	Flxible-Twin Coach FT-33	40	CS	222	403	378	80⅜-72	15800	10.00/20	Fag FTC-200	4-G	UF	6-4⅜x5	451	45.9	200-2800	400-1600	7.28	....	I	....
13	FT-35	44	CS	232½	420	402	80⅜-72	16600	10.00/20	Fag FTC-200	4-G	UF	6-4⅜x5	451	45.9	200-2800	400-1600	7.28	....	I	....
14	FT-40	52	CS	274¾	480	462	80⅜-72	18500	11.00/20	Fag FTC-210	4-G	UF	6-4½x5	477	48.6	210-2800	480-1600	7.09	....	I	....
15	FT-40DL	52	CS	274¾	480	462	80⅜-72	18500	11.00/20	Fag FLDH600	4-D	UF	6-4 11/16x5½	597	55.5	160-2225	455-1200	15.8	450-300	I	abcd
16	G.M.C. TGH3102	31	CS	180½	325⅝	287	81¼-75¼	9635	8.25/20	Own 270	4-G	TR	6-3 15/16x4	270	34.3	124-3200	232-1000	7.75	165-1000	I	abcdfgh
17	TDH3714	37	CS	210½	369½	336	79¼-70½	15375	10.00/20	Own 4-71	2-D	TR	4-4¼x5	284	28.9	143-2100	375-1600	17.0	385-500	I	abcdfgh
18	TDH4512	45	CS	238¾	420	389	78⅞-70½	17050	10.00/20	Own 6-71	2-D	TR	6-4¼x5	426	43.4	172-2000	496-1200	17.0	385-500	I	abcdfgh
19	TDM4515	45	Sub	238¾	420	389	78⅞-70½	19055	10.00/20	Own 6-71	2-D	TR	6-4¼x5	426	43.4	211-2000	574-1600	17.0	385-500	I	abcdfgh
20	TDH5105	51	CS	281¾	477	441	87¼-76½	18620	11.00/20	Own 6-71	2-D	TR	6-4¼x5	426	43.4	172-2000	496-1200	17.0	385-500	I	abcdfgh
21	TDH5106	51	CS	281¾	477	441	80⅞-70½	18270	11.00/20	Own 6-71	2-D	TR	6-4¼x5	426	43.4	172-2000	496-4200	17.0	385-500	I	abcdfgh
22	TDM5108	51	Sub	281¾	477	441	80⅞-70½	20615	11.00/20	Own 6-71	2-D	TR	6-4¼x5	426	43.4	211-2000	574-1600	17.0	385-500	I	abcdfgh
23	PD4104	41	P	261	420	390	78⅞-70½	19425	11.00/20	Own 6-71	2-D	TR	6-4¼x5	426	43.4	211-2000	574-4600	17.0	385-500	I	abcdfgh
24	Mack C-41	41	CS	237½	396	366⅝	79 11/16-70⅞	18000	10.00/20	Own END673[1]	4-D	TR	6-4⅞x6	672	57.0	170-2100	480-1200	16.6	538-1000	I	acdeh
25	C-47	45	CS	261½	420	390⅝	79 11/16-70⅞	18500	10.00/20	Own END673[2]	4-D	TR	6-4⅞x6	672	57.0	170-2100	480-1200	16.6	530-1000	I	acdeh
26	C-49	51	CS	289½	472½	443	79 11/16-70⅞	20250	11.00/20	Own END673[2]	4-D	TR	6-4⅞x6	672	57.0	170-2100	480-1200	16.6	530-1000	I	acdeh
27	97-D	41	IC	245⅝	420	390	80¼-71⅝	22100	11.00/20	Own ENDT673	4-D	TR	6-4⅞x6	672	57.0	205-2100	560-1500	16.6	550-1000	I	acdeh
28	Southern Coach S-45-DHC	45	CS	232⅞	419	404	80¼-72	18714	11.00/22	Cum NHHB600	4-D	UF	6-5⅛x6	743	63.0	200-2100	535-1200	15.5	....	I	abcdf
29	S-36-DHL	36	CS	194⅞	356½	341½	80¼-71½	14460	10.00/20	Fag FLDH600	D	UF	6-4 11/16x5½	597	55.2	160-2400	452-1200	15.8	....	I	acdfgi
30	S-41-HF	41	CS	221⅜	391½	377½	80¼-72	15300	11.00/20	Fag FTC180	4-G	UF	6-4¼x4¾	404	43.4	180-2400	390-1600	7.50	....	I	acdf
31	S-50-DHC	50	CS	275⅜	461½	447	86⅞-72	21310	11.00/22	Cum NHHB600	4-D	UF	6-5⅛x6	743	63.0	200-2100	535-1200	15.5	....	I	abcdf
32	R-37	33	CS	182½	356½	316½	80½-71½	14530	10.00/20	Int RD450	4-G	R	6-4⅜x5	451	45.9	182-3000	388-1600	6.50	388-1600	I	abcdf

ABBREVIATIONS

♣—Two used.
‡—Torque converter.
♦—Generator, Delco-Remy; starter, Auto-Lite.
†—Front, 14⅞; rear, 15.
●—Hundred rpm.
▲—Air suspension.

[1]—EN510C propane engine optional.
[2]—EN510C propane and ENDT673 diesel engines optional.
[3]—Four speed mechanical transmission optional.
[4]—10 or 12 also available.
a—Main bearings.
b—Wrist pins.
c—Connecting rods.

d—Camshaft.
e—Accessory drive.
f—Valve lifters or rocker arms and shafts.
g—Timing gears or chain.
h—Air compressor.
i—Balancer shaft.
A—Air.
AL—Electric Auto-Lite Co.
BL—Brown-Lipe.

Bos—American Bosch Div.
Ce—Centrifugal.
CIC—City and intercity service.
Cla—Clark Equipment Co.
CS—City service.
Cum—Cummins Engine Co.
D—Diesel fuel.
Do—Downdraft.
DR—Delco-Remy Div.

For Directory of Bus Manufacturers listed above, see Table of Contents

Progress in Passenger Car Engine Design

Average for Passenger Car Engines—Based on Number of Chassis Models Offered for Years 1936-1952
Based on Engine Models for 1953-1959

Year	Average Hp. per Cu. In. of Displacement	Average Compression Ratio	Average B. M. E. P. at Maximum Hp. (lb. per sq. in.)	Bore (In.)	Stroke (In.)	Disp. (Cu. In.)
1936	.411	6.14	92.3	3.39	4.32	267.9
1937	.417	6.25	93.1	3.25	4.31	277.6
1938	.412	6.32	91.2	3.25	4.27	271.1
1939	.418	6.32	92.7	3.24	4.23	255.3
1940	.426	6.41	93.9	3.25	4.17	254.0
1941	.431	6.63	96.7	3.26	4.15	252.1
1942	.446	6.60	98.5	3.26	4.18	251.8
1946	.440	6.77	94.6	3.27	4.11	246.4
1947	.437	6.73	94.5	3.28	4.18	250.4
1948	.437	6.78	95.3	3.29	4.12	247.1
1949	.453	6.93	97.3	3.35	4.10	250.0
1950	.455	7.00	98.6	3.37	4.11	256.1
1951	.474	7.09	99.5	3.40	4.00	250.4
1952	.488	7.14	101.4	3.39	3.96	251.6
1953	.518	7.31	106.0	3.40	3.97	241.4
1954	.564	7.31	113.1	3.46	3.93	249.5
1955	.639	7.87	118.1	3.62	3.57	271.8
1956	.691	8.47	127.2	3.72	3.63	297.3
1957	.765	8.75	133.4	3.74	3.60	304.1
1958	.787	9.32	138.8	3.86	3.61	325.9
1959	.746	9.30	136.3	3.90	3.59	329.2

1959... INTEGRAL BUSES

CITY AND INTERCITY

Fuel System: Carburetor or Injector Pump — Make and Type	Size (In.)	Tank Capacity (Gal.)	Electrical System: Ignition System—Make	Generator and Starter—Make	Battery: Voltage and Amp. Hours Capacity	Governor: Type	Max. Governed Speed—M.P.H.	Clutch—Make and Size (In. diam.)	Transmission: Make	No. of Forward Speeds	Low Speed Ratio—to 1	Type	Universals: Number	Size of Series	Rear Axle: Make and Model	Standard Gear Ratio—to 1	Brakes: Service: Type of Applicator	Total Lining Area (Sq. In.)	Drum Diam. (In.)	Hand: Operates on—	Total Lining Area (Sq. In.)	Springs: Front: No. of Leaves	Length and Width (In.)	Rear: No. of Leaves	Length and Width (In.)	Running Gear: Front Axle—Make	Steering Gear—Make	Outside Diameter of Min. Turn. Circle (Ft.)	Line Number
Hol Do	1¼	70	DR	♦	12-158	Su	Var	LR 15	Fu	5	8.08	M	2	1600	Tim L143P	5.29	A	960	16½	Ds	65	11	50-4	17	60-4	Tim	Ro	70	1
Hol Do	1¼	70	DR	♦	12-158	Su	Var	Lg 15½	Fu	5	8.08	H	2	1700	Tim QT143P	4.63	A	960	16½	Ds	65	11	50-4	17	60-4	Tim	Ro	70	2
Hol Do	1¼	70	DR	♦	12-158	Su	Var	LR 15	Fu	5	8.08	M	2	1600	Tim L143P	5.29	A	960	16½	Ds	65	11	50-4	17	60-4	Tim	Ro	78	3
Hol Do	1¼	70	DR	♦	12-158	Su	Var	Lg 15½	Fu	5	8.08	H	2	1700	Tim QT143P	4.63	A	960	16½	Ds	65	11	50-4	17	60-4	Tim	Ro	78	4
Hol Do	2	70	DR	♦	12-158	V	Var	Lg 17	Fu	5	7.33	M	2	1700	Tim R143P	4.11	A	960	16½	Ds	65	12	50-4	18	60-4	Tim	Ro	78	5
Cum		70	AL	♦	12-158		Var	Lg 17	Fu	5	7.33	M	2	1700	Tim R143P	4.11	A	960	16½	Ds	65	12	50-4	18	60-4	Tim	Ro	78	6
Cum		70		LN	12-158	Ce	Var	Spi 14	F-S	5[4]			2	1700	Tim R	4.11		960	16½	Ds	65	12	50-4	18	60-4	Tim	Ro	78	7
		100	DR	LD	12-158			Lg 17	Fu	5	7.33	M	2	1700	Tim SLHD	4.11	A	1216	16½	Ds	65	12	50-4	11	57¾-4	Tim	Ro	102½	8
Dup Do	1¾	90	DR	DR	12-160	Ce	69	Lg 15½	Cla	4	4.35	M	2	1600	Tim H143P	4.62	A	610	16½	Ds	45	△		△		Tim	Ro	76	9
GM		90	DR	DR	12-160	Ce	66	Lg 15½	Spi	5	5.08	M	2	1500	Tim H143	4.62	A	610	16½	Ds	45	△		△		Tim	Ro	76	10
GM		125		DR	12-160			Lg 17½	Spi	5	5.08	M	2	1600	Tim R163		A	792	16½			△		△		Own	Ro	81	11
Hol Do		125	DR	LD	12-160	Ce	28●	None	Spi‡		5.43	H	2	1600	Tim Q110	6.16	A	844	16½	Ds	63	13	56-4	13	60-4		Ro	67⅔	12
Hol Do			DR	LD	12-160	Ce	28●	None	Spi‡		5.43	H	2	1600	Tim Q110	6.16	A	844	16½	Ds	63	12	60-4	13	64-4	Tim	Ro	69⅔	13
Hol Do			DR	LD	12-160	Ce			Spi‡		5.43	H	2	1600	Tim R110	6.16	A	844	16½	Ds	63	13	60-4	15	64-4	Tim	Ro	79½	14
Ros		125		LN	12-160	Ce	23●	None	Spi‡		5.43	H	2	1600	Tim R110	6.17	A	844	16½	Ds	63	13	60-4	15	64-4	Tim	Ro	79½	15
Zen Do	1½	60	DR	DR	12-150	Ce	52		GM	4	3.82	GH	2	1400	Cla 130017	6.33	A	587	14½	Ds	28	10	52-3	11	59.3	Cla	Sag	66	16
Own		80		DR	12-175♠	Ce	46	Own 15	GM‡	If		H	2	1600	Tim 57620W	5.16	A	646	14½	Ds	69	△		△		Tim	Sag	70	17
Own		80		DR	12-175♠	Ce	48	Own 15	GM‡	If		H	2	1700	Tim 58820W	4.71	A	705	14½	Ds	104	△		△		Tim	Sag	78	18
Own		80		DR	12-175♠	Ce	57	Lg 17	Spi	4	4.36	M	2	1700	Tim 58600W	4.13	A	705	14½	Ds	104	△		△		Tim	Sag	78	19
Own		80		DR	12-175♠	Ce	45	Own 15	GM‡	If		H	2	1700	Tim 59721W	5.14	A	882	14½	Ds	104	△		△		Tim	Sag	82	20
Own		80		DR	12-175♠	Ce	45	Own 15	GM‡	If		H	2	1700	Tim 59720W	5.14	A	882	14½	Ds	104	△		△		Tim	Sag	81	21
Own		80		DR	12-175♠	Ce	58½	Lg 17	Spi	4	4.36	M	2	1700	Tim 59610W	4.13	A	882	14½	Ds	104	△		△		Tim	Sag	81	22
Own		140		DR	12-205♠	Ce	58½	Lg 17	Spi	4	3.86	M	2	1700	Tim 59600W	4.13	A	764	14½	Ds	125½	△		△		Tim	Ro	84	23
Bos		80		DR	12-200	Ce	21●	Spi 16	Spi‡[3]	If		H	2	1700	Own RAS402	Var	A	784	15	Ds	139	△		△		Own	Gem	67	24
Bos		80		DR	12-200	Ce	21●	Spi 16	Spi‡[3]	If		H	2	1700	Own RAS402	Var	A	784	15	Ds	139	△		△		Own	Gem	72	25
Bos		80		DR	12-200	Ce	21●	Spi 16	Spi‡[3]	If		H	2	1700	Own RAS402	Var	A	843	15	Ds	139	△		△		Own	Gem	74⅝	26
Bos		120		DR	12-160	Ce	21●	Lg 17	Own	4	4.66	M	2	1700	Own RAS403	3.73	A	843	15	Ds	139	△		△		Own	Gem	68	27
Cum		115		Op	12-168	Ce	41	Spi 16	Spi‡	If		H	2	1700	Tim R110WX8	6.83	A	786	16½	Ds	126	13	62-3½	16	70-4	Tim	Ro	84⅓	28
Ros		115		Op	12-168		41	Spi 14	Spi‡	If		H	2	1600	Tim L110P	6.16	A	622	16½	Ds	101	[illegible]	62-3½	12	70-4	Tim	Ro	71⅓	29
Hol Do		115	Mal	Op	12-168	Su	41	Spi 14	Spi‡	If		H	2	1600	Tim Q110P	6.83	A	685	16½	Ds	101	12	62-3½	14	70-4	Tim	Ro	80	30
Cum		115		Op	12-168	Ce	41	Spi 16	Spi‡	If		H	2	1700	Tim R110W	6.83	A	904	16½	Ds	126	△		△		Tim	Ro	82½	31
Hol Do		75	DR	LN	12-168	Su	50	BL 14	Spi	3	3.80	M	2	1500	Tim L110	6.16	A	684	16½	Ds	96	10	62-3½	14	70-4	Tim	Ro	63	32

Ds—Drive shaft.
Dup—Duplex.
Fag—Fageol.
F-S—Fuller or Spicer.
Fu—Fuller Mfg. Co.
G—Gasoline.
Gem—Gemmer Mfg. Co.
GH—G. M. Hydramatic.
GM—General Motors Corp.
H—Hydraulic.
Hol—Holley Carburetor Co.
HS—Hall-Scott.
I—Valve in head.
IC—Intercity service. **If**—Infinite.
Int—International Harvester Co.
L—Valves in side.
LD—Leece-Neville (alternator); Delco-Remy (starter).
Lg—Long Mfg. Div.
LN—Leece-Neville Co.
LR—Lipe Rollway Corp.
Mal—Mallory. **P**—Parlor.
Op—Optional. **R**—Rear.
Ro—Ross Gear and Tool Co.
Ros—Roosa-Master.
Sag—Saginaw Steering Gear Div.
Spi—Spicer Mfg. Div.
Su—Suction.
Sub—Suburban service.
Tim—Timken Detroit Axle Co.
TR—Transverse in rear.
UF—Under floor.
V—Vacuum. **Var**—Variable.
Whl—White Motor Co.
Zen—Zenith Carburetor Div.

For Directory of Bus Manufacturers listed above, see Table of Contents

Progress in Passenger Car Engine Design

Average for Passenger Car Engines—Based on Number of Chassis Models Offered for Years 1936-1952
Based on Engine Models for 1953-1959

Year	Average Piston Speeds (Ft. per Min.)	Average Displacement per Cylinder (Cu. In.)	Average Number of Cylinders	Average R.P.M. at Max. B.H.P.	Average Brake Horsepower
1936	2498	35.6	7.50	3487	110.1
1937	2554	35.8	7.74	3556	115.9
1938	2545	35.7	7.60	3576	111.7
1939	2498	35.1	7.28	3543	105.9
1940	2490	35.0	7.25	3580	107.9
1941	2492	35.2	7.15	3603	110.9
1942	2534	34.9	7.20	3638	112.5
1946	2522	35.4	6.97	3682	108.4
1947	2550	35.8	7.00	3680	109.4
1948	2492	35.6	6.95	3629	107.9
1949	2522	36.8	6.80	3690	113.3
1950	2505	37.2	6.88	3857	116.6
1951	2505	36.8	6.80	3758	118.0
1952	2523	36.6	6.87	3823	122.8
1953	2560	36.1	6.69	3869	125.0
1954	2589	36.8	6.78	3953	140.8
1955	2585	36.7	7.40	4284	173.8
1956	2634	39.6	7.51	4353	207.9
1957	2724	39.9	7.62	4540	232.6
1958	2735	42.3	7.70	4545	259.6
1959	2651	43.2	7.62	4431	251.1

WHEEL TRACTORS ... 1959

For Crawler Tractor Specifications refer to

Line Number	Tractor Make	Model	General: Wheelbase (In.)	General: Minimum Turning Radius Outside (Ft.)	General: Ground Clearance (In.)	General: Shipping Weight with Rubber Tires (Lb.)	Tread (In.): Minimum	Tread (In.): Maximum	Drawbar: Lateral Adjustment (In.)	Drawbar: Height Above Ground (In.)	Overall Dimensions: Length (In.)	Overall Dimensions: Width (In.)	Overall Dimensions: Height—To Highest Point (In.)	Tire Size (In.): Front	Tire Size (In.): Rear	H.P. Rating: Belt	H.P. Rating: Drawbar	Nebraska Test Number	Power Take-Off	Forward Travel Speeds at Normal Governed Engine RPM with Standard Wheels: No. of Speeds	Forward: Range (MPH)	Reverse Travel Speeds at Normal Governed Engine RPM with Standard Wheels: No. of Speeds	Reverse: Range (MPH)
1	Allis-Chalmers	1B	57 7/16	7	12 7/8	2365	40 1/2	52 1/2		11 1/2	97 1/2	52 5/8	54 1/2	5.00/15	9/24	22.87	18.00		Op	3	3.50-10.00	1	3.80
2		B	73 13/16	7 3/4	21 3/4	2060	40 1/2	52 1/2	22 1/4	12 1/2	110 1/4	52 15/16	62 3/4	4.00/15	9/24	22.87	19.51	302	Op	3	2.75-8.50	1	3.00
3		CA	81 1/8	7 1/2	22 1/2	3000	52	80	14 5/8	14	124 5/8	67 3/8†	76 3/8	5.00/15	10/24	26.62	23.55	453	St	4	2.00-11.25	1	3.50
4		G	68 1/2	6 1/2	17 3/8	1285	36	64	7 5/8	13	116	36†	55 15/16	4.00/12	6/30	10.91■	9.59■	398		4	1.60-6.91	1	1.96
5		WD-45	88	8 1/2	28 1/8	4465	56	90	8 1/8	Ad	128	74 1/16†	81 1/2	5.50/16	12/28	45.27	40.01	499	St	4	2.40-11.25	1	3.00
6		WD-45	88 1/8	8	29 1/2	4730	55 5/16	90 1/8	8 1/8	Ad	128 1/16	74 1/16	89	5.50/16	12/28	45.42	40.42	563	St	4	2.40-11.25	1	3.17
7		D-14	85 3/4	8 1/2	19 3/4	4175	54	80	10 3/4	12 5/8	128 3/4	69 1/2	79 9/16	5.50/16	11/28	35.65	32.19	623	St	8	1.50-12.00	2	2.60-3.75
8		D-17	93	9 1/2	21	5280	58 1/16	92 15/16	10 3/4	14 5/8	140 1/4	76 3/4	81	6.00/16	13/28			NT	Op	8	1.80-12.00	2	2.40-3.50
9		D-17D	95 3/4	9 7/12	21	5680	58 1/16	92 15/16	10 3/4	14 5/8	143	76 3/4	81	6.00/16	13/28			NT	Op	8	1.80-12.00	2	2.40-3.50
10		D-14LPG	85 3/4	9 7/12	21 1/4	4220	51	80	10 3/4	13 1/2	128 3/4	67	79 9/16	5.50/16	11/28	33.23	29.61	645	St	8	1.50-12.00	2	2.60-3.75
11		D-17LPG	93	9 1/2	21	5440	53	92 15/16	10 3/4	15 1/16	140 1/16	76 3/4	81	6.00/16	13/28	53.00	47.24	644	St	8	1.80-12.00	2	2.40-3.50
12	Brockway	49D	76 1/2	10 1/4	20	3600	48	76	28 1/2	16	115	63	62 1/2	6.00/16	11/28	35.00	32.00		St	4	2.16-12.00	1	1.72
13		49G	76 1/2	10 1/4	20	3600	48	76	28 1/2	16	115	63	62 1/2	6.00/16	11/28	31.75	28.00		St	4	2.16-15.00	1	1.69
14		49K	76 1/2	10 1/4	20	3600	48	76	28 1/2	16	115	63	62 1/2	6.00/16	11/28	27.00	24.00		St	4	2.16-15.00	1	1.69
15	Case	211B	84 3/8	7 3/4	19 1/2	2958	48	88	16		130	79 1/2	59 1/2	5.00/15	10/28			NT	Op	4	2.70-12.90	1	3.20
16		311B	84 3/8	7 3/4	21 1/2	3274	48	88	16		130	79 1/2	61	5.50/16	11/28			NT	Op	4	2.80-13.40	1	3.30
17		411B	84 3/8	7 3/4	21 1/2	3435	54	88	16		130	79 1/2	61	5.50/16	12/28			NT	Op	8	0-10.90	2	0-2.80
18		511B	87	7 3/4	25	4450	54	88	16		139	81 3/4	65 1/2	6.00/16	12.40/36			NT	Op	12	1.60-21.70	3	1.90-5.40
19		611B	87	7 3/4	25	4475	54	88			139	80 3/4	65 1/2	6.00/16	12.40/36			NT	Op	8	0-11.20	2	0-2.80
20		711B	92 1/4		26 1/4	5800	52	108	20 1/4	11 15/16†	143 3/8	85 1/4	93 1/2	6.00/16	15.50/38	54.00	47.00	NT	Op	8	1.40-13.70	2	1.70-6.20
21		701B	92 1/4		26 1/4	6013	52	108	20 1/4	11 15/16†	143 3/8	85 1/4	93 1/2	6.00/16	15.50/38	54.00	47.00	NT	Op	8	1.40-13.70	2	1.70-6.20
22		811B	92 1/4		26 1/4	6165	52	108	20 1/4	11 15/16†	143 3/8	85 1/4	93 1/2	6.00/16	15.50/38			NT	Op	8	0-18.00	2	0-6.20
23		801B	92 1/4		26 1/4	6364	52	108	20 1/4	11 15/16†	143 3/8	85 1/4	93 1/2	6.00/16	15.50/38			NT	Op	8	0-18.00	2	0-6.20
24		900B	83 13/16		13 1/16	7882	67 1/2	67 1/2	43 1/4		141	84	93 1/2	7.50/18	15/34			NT	Op	6	2.70-13.90	1	3.20
25		910B	83 13/16		13 1/16	7920	67 1/2	67 1/2	43 1/4		141	84	93 1/2	7.50/18	15/34			NT	Op	6	2.50-12.50	1	2.90
26	Caterpillar	DW15	121 1/2	41 1/2	15 1/8	21530					200 5/8	107 1/4	111	12/20	26.50/25					5	2.70-29.10	1	4.10
27		DW20	128	42	16	26545					211 3/4	118	125 13/16	14/24	29.50/29					5	2.80-25.10	1	3.70
28		DW21	307	36	18	39360					188	141	132	N	29.50/29					5	2.30-20.50	1	3.00
29	Cockshutt	540	81	12 1/2	19 1/2	4295	48	76	8	Ad	120	66	60	5.50/16	11/28				St	6	1.70-12.10	2	2.70-5.20
30		550G	87	14 1/3	17	4500	53 3/8	92	12	Ad	132	74	74 1/2	5.50/16	11/38				Op	6	1.85-13.40	2	3.26-6.22
31		550D	87	14 1/3	17	4560	53 3/8	92	12	Ad	132	74	74 1/2	5.50/16	11/38				Op	6	1.85-13.40	2	3.26-6.22
32		560	87 3/4	14 9/10	17	5036	53 1/2	112	11 1/2	Ad	138	72 1/2	78	6.00/16	14/34	50.45	46.65		Op	6	1.81-13.20	2	3.19-6.08
33		570G	87 3/4	14 9/10	17	6320	53 1/2	112	11 1/2	Ad	138	72 1/2	78	6.00/16	14/34				Op	6	1.81-13.20	2	3.19-6.08
34		570D	87 3/4	14 9/10	17	6300	53 1/2	112	11 1/2	Ad	138	72 1/2	78	6.00/16	14/34				Op	6	1.81-13.20	2	3.19-6.08
35	Deere, John	330-S	70		21	2650	38 3/4	54 1/2	25 1/2	Ad	115 3/4	53 1/2	69 3/4	5.00/15	9/24				St	4	1.63-12.00	1	1.63
36		330-U	77 3/4		11	2750	40 7/8	56 3/8	6 21/64	11 13/32	119 1/4	55 1/2	65 1/4	5.00/15	9/24				Op	4	1.63-12.00	1	1.63
37		430-H	80 3/4		32 1/2	3400	54	84	12	Ad	132	72	86	6.50/16	10/38	29.21	27.08		Op	4	1.63-6.25	1	2.50
38		430-S	70		21	2750	38 3/4	54 1/4	12	Ad	114 3/4	55 1/2	73 5/8	5.00/15	9/24	29.21	27.08		St	4	1.63-6.25	1	2.50
39		430-T	82 1/4		21	3000	48	96	10 13/16	Ad	130 5/8	88 1/2	76 5/8	5.00/15	10/34	29.21	27.08		St	4	1.63-6.25	1	2.50
40		430-U	77 3/4	8 2/3	14 1/2	2847	40 7/8	56 3/8	6 21/64	Ad	119 1/4	58 1/4	68 3/8	5.00/15	10/24	29.21	27.08		Op	4	1.63-6.25	1	2.50
41		430-V	72 3/8		26 1/4	3050	46	80	19 13/16	Ad	124	74	81 1/4	5.00/15	10/34	29.21	27.08		St	4	1.63-6.25	1	2.50
42		430-W	85		21	3000	48	98	6	16 1/2	130 5/8	85 3/4	74			29.21	27.08		Op	4	1.63-6.25	1	2.50
43		440-I	85		20 1/4	3800	60	60	6	16 1/2	125 5/8	74 1/2	71 7/8	6.00/16	12/26	29.21	27.08		Op	4	2.00-6.82	1	2.91
44		530-R	90	8 1/2	24 3/4	4960	56	88	8 1/4	16 1/8	132 3/4	86 5/8	83 1/8	5.50/16	12.40/36	38.58	34.31	597	Op	6	1.50-10.00	1	2.50
45		630-R	90	8 1/2	25 1/8	5860	56	88	8 1/4	16 1/8	139	86 5/8	84 1/8	6.00/16	13.60/38	48.68	44.16	598	Op	6	1.50-11.50	1	3.00
46		630-S	80 1/2	14	25 1/4	6480	62	80	8 1/4	16 1/8	123 5/8	86 5/8	81 1/8	6.00/16	15/30	48.68	44.16	598	Op	6	1.33-10.50	1	2.25
47		630-H	98 3/4	16 1/2	30 7/8	7250	60	90			151	86 5/8	101	7.50/20	13.60/38	48.68	44.16	598	Op	6	1.50-11.33	1	3.00
48		620-O	75 1/4	13 1/2		6345	55 1/16	63 1/16	27	12 1/2	125 1/2	71 5/8	57	6.00/16	14/26	48.68	44.16	598	Op	6	1.50-10.75	1	2.75
49		730-R	91 3/8	8 1/2	25 13/16	6790	56	80	8 1/4	16 1/8	135 1/4	86 5/8	88 1/4	6.00/16	15.50/38	59.12	53.05	605	Op	6	1.33-11.25	1	3.33
50		730-S	82 5/8	14	13	7380	62	80	8 1/4	16 1/8	123 1/2	86 5/8	87 7/8	7.50/18	15/30	59.12	53.05	605	Op	6	1.33-11.00	1	3.25
51		730-H	99 1/8	16 1/2	30 13/16	8070	60	90			151	86 5/8	101	7.50/20	15.50/38	59.12	53.05	605	Op	6	1.33-10.50	1	3.25
52		730-R	91 3/8	8 1/2	25 13/16	7105	60	80	8 1/4	16 1/8	135 1/4	86 5/8	88 1/4	6.00/16	15.50/38	58.84	53.66	594	Op	6	1.33-11.25	1	3.33
53		730-S	82 5/8	14	13	7790	62	80	8 1/4	16 1/8	123 1/2	86 5/8	87 7/8	7.50/18	15/30	58.84	53.66	594	Op	6	1.33-11.00	1	3.25
54		730-H	99 1/8	16 1/2	30 13/16	8415	60	90			151	86 5/8	101	7.50/20	15.50/38	58.84	53.66	594	Op	6	1.33-10.50	1	3.25
55		830-S	85 1/4	15 1/2		8745	64	68	35 3/4	20 1/2	142 1/4	88	81	7.50/18	15/34	75.60	69.66	632	Op	6	2.33-12.25	1	2.50
56	Ferguson	TO-35 Std.	72	8 1/3	12 5/8	2776	48	76	17 3/64	Ad	117	63 1/2	57	6.00/16	10/28	29.33	23.76	564	St	6	1.33-14.57	2	1.77-7.09
57		TO-35 Spl.	72	8 1/3	12 5/8	2737	48	76	17 3/64	Ad	117	63 1/2	57	6.00/16	11/28	29.33	23.76	564	St	6	1.26-14.00	2	1.69-6.81
58		TO-35 Del.	72	8 1/3	12 5/8	2792	48	76	17 3/64	Ad	117	63 1/2	57	6.00/16	11/28	29.33	23.76	564	St	6	1.33-14.57	2	1.77-7.09
59		TO-35-D	72	8 1/3	12 5/8	3200	48	76	17 3/64	Ad	117	63 1/2	57	6.60/16	11/28			NT	St	6	1.33-14.57	2	1.77-7.09
60	Ford	621	74 1/2	8 11/12	20 13/32	2577	52	76	17 41/64	12 3/64	113 5/8	63 7/8†	56 5/32	5.50/16	10/28	35.25	30.73		N	4	3.72-13.73	1	3.90
61		631	74 1/2	8 11/12	20 13/32	2714	52	76	17 41/64	N	120 13/32	63 7/8†	56 5/32	5.50/16	10/28	35.25	30.73		N	4	3.72-13.73	1	3.90
62		641	74 1/2	8 11/12	21 1/32	2834	52	76	17 41/64	13 7/64	120 23/64	63 7/8†	56 15/16	5.50/16	11/28	35.25	30.73		St	4	3.80-14.04	1	3.98
63		651	74 1/2	8 11/12	21 1/32	2920	52	76	17 41/64	13 7/64	120 23/64	63 7/8†	56 15/16	5.50/16	11/28	37.39	30.13		St	5	2.39-12.38	1	4.07
64		661	74 1/2	8 11/12	21 1/32	2902	52	76	17 41/64	13 7/64	120 23/64	63 7/8†	56 15/16	5.50/16	11/28	37.39	30.13		St	5	2.39-12.38	1	4.07
65		741	85 5/16	7 11/12	27 41/64	3175	56	84	17 41/64	16 7/64	132 1/8	71 15/16	65 1/16	5.50/16	11/28	35.25	30.74		St	4	3.53-13.04	1	3.70
66		821	74 1/2	8 11/12	20 23/64	2630	52	76	17 41/64	10 13/16	113 5/8	63 7/8	56 5/32	6.00/16	10/28	46.53	42.12		N	4	3.28-12.10	1	3.44
67		841	74 1/2	8 11/12	21 23/64	2980	52	76	17 41/64	13 7/64	120 23/64	63 7/8	57 19/64	6.00/16	12/28	46.53	42.12		St	4	3.67-13.56	1	3.85
68		851	74 1/2	8 11/12	21 23/64	3062	52	76	17 41/64	13 7/64	120 23/64	63 7/8	57 5/16	6.00/16	12/28	50.20	43.28		St	5	2.30-11.96	1	3.93
69		861	74 1/2	8 11/12	21 23/64	3076	52	76	17 41/64	13 7/64	120 23/64	63 7/8	57 5/16	6.00/16	12/28	50.20	43.28		St	5	2.30-11.96	1	3.93
70		941														46.53	42.12			4	3.67-13.54	1	3.84
71		951	85 5/16	7 11/12	28 7/16	3636	56	84	17 41/64	17 5/16	132 21/32	71 15/16†	65 15/16	5.50/16	12/28	50.20	43.28		St	5	2.30-11.95	1	3.93
72		961	85 5/16	7 11/12	28 7/16	3424	56	84	17 41/64	17 5/16	132 21/32	71 15/16†	65 15/16	5.50/16	12/28	50.20	43.28		St	5	2.30-11.95	1	3.93
73		1821	81 1/2		13 3/4	3790	52	76			128	63 7/8	57 3/4			46.53	42.12	N	Op	4	3.67-13.56	1	3.85
74		1841	81 1/2		13 3/4	4002	52	76	17 41/64	13 7/64	128	63 7/8	57 3/4	7.50/16	12/28	46.53	42.12	N	Op	4	3.67-13.56	1	3.85
75		821-D	74 1/2	8 11/12	20 23/64	2734	52	76	17 41/64	10 5/16	113 5/8	63 7/8	78 13/32	6.00/16	10/28	41.53	37.75	653	N	4	3.28-12.10	1	3.44
76		841-D	74 1/2	8 11/12	21 23/64	3084	52	76	17 41/64	13 7/64	120 23/64	63 7/8	79 35/64	6.00/16	12/28	41.53	37.75	653	St	4	3.67-13.56	1	3.85
77		851-D	74 1/2	8 11/12	21 23/64	3166	52	76	17 41/64	13 7/64	120 23/64	63 7/8	79 35/64	6.00/16	12/28	44.51	38.90	654	St	5	2.30-11.96	1	3.93
78		861-D	74 1/2	8 11/12	21 23/64	3180	52	76	17 41/64	13 7/64	120 23/64	63 7/8	79 35/64	6.00/16	12/28	44.51	38.90	654	St	5	2.30-11.96	1	3.93
79		941-D				3436	56	84					88 5/64	5.50/16	12/28	41.53	37.75	653		4	3.67-13.54	1	3.84
80		951-D	85 5/16	7 11/12	28 7/16	3540	56	84	17 41/64	17 5/16	132 21/32	71 15/16†	88 5/64	5.50/16	12/28	44.51	38.90	654	St	5	2.30-11.95	1	3.93
81		961-D	85 5/16	7 11/12	28 7/16	3528	56	84	17 41/64	17 5/16	132 21/32	71 15/16†	88 5/64	5.50/16	12/28	44.51	38.90	654	St	5	2.30-11.95	1	3.93
82		1821-D	74 1/2		13 3/4	3918	52	76			128	63 7/8	57 3/4			46.53	42.12	N	Op	4	3.67-13.56	1	3.85
83		1841-D	81 1/2		13 3/4	4130	52	76	17 41/64	13 7/64	128	63 7/8	57 3/4	7.50/16	12/28	46.53	42.12	N	Op	4	3.67-13.56	1	3.85

For Key to References and Abbreviations See Pages 136 and 137

For Directory of Tractor Manufacturers listed above, see Table of Contents

1959... WHEEL TRACTORS

Construction and Off-Highway Equipment Section

Make and Model	ENGINE: Number of Cylinders—Bore and Stroke (In.)	Piston Disp. (Cu. In.)	R.P.M. at Governed Speed	Valve Arrangement	Number of Main Bearings	Diameter of Main Bearings	FUEL: Standard	FUEL: Optional	Ignition Make	Carburetor or Injector Pump Make	Air Cleaner Make	Governor Make	Oiling System Type	Cooling System Type	Clutch—Make and Type	Final Drive—Type	BELT PULLEY: Diameter (In.)	BELT PULLEY: Face (In.)	BELT PULLEY: Normal R.P.M.	Steering Type	CAPACITIES: Cooling System (Gal.)	CAPACITIES: Fuel Tank (Gal.)	CAPACITIES: Crankcase (Qts.)	CAPACITIES: Transmission (Qts.)	CAPACITIES: Final Drive Case (Qts.)	Starting Method	Line Number
Own 1B	4-3⅜x3½	125	1500	I	3	2¼	G		FM	Zen	Don	Own	P	Pu	Roc SP	SG	8	5½	1130	FK	2	13	4	7	4	Ele	1
Own B	4-3⅜x3½	125	1500	I	3	2¼	G, D		FM	Zen	Don	Own	P	Pu	Roc SP	SG	8	5½	1130	FK	2	13	4	6	* ¾	Ele	2
Own CE	4-3⅜x3½	125	1650	I	3	2¼	G	K	DR	Zen	Don	Own	P	Pu	Roc SP	SG	8	5½	1220		2	13	4	8½	*1½	Ele	3
Cont N62	4-2⅝x3½	62	1800	L	2	2	G		DR	Mar	Don	Cont	P	TS	Roc SP		6	4	1950	FK	1⅝	5	3½	8		Ele	4
Own WD	4-4x4½	226	1400	I	3	2½	G, D		DR	Zen	Uni	Own	P	Pu	Roc SP	SG	9	6½	1260	WS	3½	15	6	17	1¾	Ele	5
Own	6-3 7/16x4⅛	230	1625	I	7	2½	O		N	Bos	Uni	Bos	P	Pu	Roc SP[a]	SG	9	6½	1463	WS	4¼	15	6	17	*1¾	Ele	6
Own 149	4-3½x3⅞	149	1650	I	3	2¾	G		DR	Mar	Don	Own	P	Pu	Roc SP	SG	9	6 9/16	1384	FK	2¼	14	4	14½	2	Ele	7
Own 17	4-4x4½	226	1650	I	3	3	G		DR	Zen	Uni	Own	P	Pu	Roc SP	SG	9	6 9/16	1384	FK	3⅝	20¾	6	25	2½	Ele	8
Own DA262	6-3 9/16x4⅜	262	1650	I	7	2½	D			Ros	Uni	Ros	P	Pu	Roc SP	SG	9	6 9/16	1384	FK	4	20¾	6	25	2½	Ele	9
Own 149	4-3½x3⅞	149	1650	I	3	2¾	LP		DR	Ens	Don	Own	P	Pu	Roc SP	SG	9	6 9/16	1384	FK	2¼	15¾	4	14½	1½	Ele	10
Own 226	4-4x4½	226	1650	I	3	3	LP		DR	Ens	Uni	Own	P	Pu	Roc SP	SG	9	6 9/16	1384	FK	3⅝	22⅝	6	28	2½	Ele	11
Cont GD157	4-3⅜x4⅜	157	2000	I	3	2⅜	O		AL	Bos	Don		P	TS	Roc SP	CH	8½	6¼	1650	FK	5	12½	5	14	4	Ele	12
Cont F162	4-3 7/16x4⅜	162	2400	I	3	2½	G		AL	Mar	Don		P	TS	Roc SP	CH	8½	6¼	1800	FK	5	12½	5	14	4	Ele	13
Cont F162	4-3x4⅜	162	2400	I	3	2½	K		AL	Mar	Don		P	TS	Roc SP	CH	8½	6¼	1800	FK	5	12½	5	14	*2	Ele	14
Own	4-3⅛x4⅛	127	1900	I	3	2¼	G		AL	Mar	Don	Own	P	Pu	Au SP	SG	9¼	6⅜	1290	FK	3¼	13	5	28	(a)	Ele	15
Own	4-3⅜x4⅛	148	1900	I	3	2¼	G	LP	AL	Mar	Don	Own	P	Pu	Au SP	SG	9¼	6⅜	1290	FK	3¼	13	5	28	(a)	Ele	16
Own	4-3⅜x4⅛	148	2000	I	3	2¼	G	LP	AL	M-Z	Don	Own	P	Pu	TD TC	SG	10¼	6	1190	FK	3¼	13⅞	5	28	(a)	Ele	17
Own	4-3 9/16x4⅛	164	2000	I	3	2¼	G	LP	AL	M-Z	Don	Own	P	Pu	Au SP	SG	9¼	6⅜	1140	FK	3¼	13⅞	5	44	(a)	Ele	18
	4-3 9/16x4⅛	164	2250	I	3	2¼	G	LP	AL	M-Z	Don	Own	P	Pu	TD TC	SG	9¼	6⅜	1290	FK	3¼	13⅞	5	44	(a)	Ele	19
Own	4-4x5	251	1500	I	5	3	G	LP, D	AL	Mar	Don	Own	P	Pu	Roc SP	SG	10½	7¼	1166	FK	7½	22	9	60	(a)	Ele	20
Own	4-4⅛x5	267	1500	I	5	3	O	D	N	Bos	Don	Own	P	Pu	Roc SP	SG	10½	7¼	1166	FK	7½	22	9	60	(a)	Ele	21
Own	4-4x5	251	1800	I	5	3	G	LP	AL	Mar	Don	Own	P	Pu	TD TC	SG	10½	7¼	1128	FK	7½	22	9	60	(a)	Ele	22
Own	4-4⅛x5	267	1800	I	5	3	O		N	Bos	Don	Own	P	Pu	TD TC	SG	10½	7¼	1128	FK	7½	22	9	60	(a)	Ele	23
Own 900	6-4x5	377	1500	I	7	3	O		N	Bos	Don	Own	P	Pu	Own SO	CH	13½	8¼	944	SA	10½	28	14	64	(a)	Ele	24
Own 900	6-4x5	377	1350	I	7	3	LP		AL	Ens	Don	Own	P	Pu	Own SO	CH	13½	8¼	944	SA	10½	28	14	64	(a)	Ele	25
Own D362F	6-5⅛x6½	805	2000	I	7	4¼	O		N	Own	Don	Own	P	Pu	Own DP	SH					20	75	33	82	(a)	EG	26
Own D337F	6-5⅛x6½	805	1800	I	7	4¼	O		N	Own	Don	Own	P	Pu	Own DP	SH					22½	90	33	112	(a)	EG	27
Own DW21	6-5⅛x6½	805	1800	I	7	4¼	O		N	Own	Don	Own	P	Pu	Own DP	SH					22½	100	33	108	(a)	EG	28
Cont F162	4-3 7/16x4⅜	163	1800	L	3	2¼	G		DR	Zen	Don	Nov	P	Pu	BB SP	SG	9	6½	1084	DA	3	13½	4	25	(a)	Ele	29
Her GO198	4-3¾x4½	198	1650	I	5	2½	G		DR	Zen	Don	Nov	P	Pu	BB SP	SG	10	6½	1195	DFS	4½	19¼	4¾	25	(a)	Ele	30
Her DD198	4-3¾x4½	198	1650	I	5	2½	O		N	Bos	Don	Bos	P	Pu	BB SP	SG	10	6½	1195	DFS	4½	19¼	4¾	25	(a)	Ele	31
Per 4270D	4-4¼x4¾	270	1650	I	5	3	O		N	Luc	Don	Luc	P	Pu	BB SP	SG	10	8½	1195	DFS	3½	30	8½	38	(a)	Ele	32
Her GO298	6-3¾x4½	298	1650	I	7	2½	G		DR	Zen	Don	Nov	P	Pu	BB SP	SG	10	8½	1195	DFS	4¾		8	38	(a)	Ele	33
Her DD298	6-3¾x4½	298	1650	I	7	2½	O		N	Bos	Don	Bos	P	Pu	BB SP	SG	10	8½	1195	DFS	4¾		8	38	(a)	Ele	34
Own 330	2-4x4	101	1650	I	2	2 13/32	G	O	DR	Mar	Don	Own	P	TS	Au SP	SG	9 1/16	6⅜	1246	DA	3½	10½	5	8	3½	Ele	35
Own 330	2-4x4	101	1650	I	2	2 13/32	G	O	DR	Mar	Don	Own	P	TS	Au SP	SG	9 1/16	6⅜	1246	DA	3½	10½	5	8	2½	Ele	36
Own 430	2-4¼x4	113	1850	I	2	2 13/32	G	O	DR	Mar	Don	Own	P	Pu	Au SP	SG	9 1/16	6⅜	1270	DA	2½	10½	5	8	4	Ele	37
Own 430	2-4¼x4	113	1850	I	2	2 13/32	G	LP, O	DR	Mar	Don	Own	P	Pu	Au SP	SG	9 1/16	6⅜	1270	DF	2½	10½	5	8	3½	Ele	38
Own 430	2-4¼x4	113	1850	I	2	2 13/32	G	LP, O	DR	Mar	Don	Own	P	Pu	Au SP	SG	9 1/16	6⅜	1270	DA	2½	10½	5	9	4	Ele	39
Own 430	2-4¼x4	113	1850	I	2	2 13/32	G	LP, O	DR	Mar	Don	Own	P	Pu	Au SP	SG	9 1/16	6⅜	1270	DA	2½	10½	5	8	2½	Ele	40
Own 430	2-4¼x4	113	1850	I	2	2 13/32	G	LP, O	DR	Mar	Don	Own	P	Pu	Au SP	SG	9 1/16	6⅜	1270	DA	2½	10½	5	8	3½	Ele	41
Own 430	2-4¼x4	113	1850	I	2	2 13/32	G	LP, O	DR	Mar	Don	Own	P	Pu	Au SP	SG	9 1/16	6⅜	1270	DA	2½	10½	5	9	7	Ele	42
Own 440	2-4¼x4	113	1850	I	2	2 13/32	G	O	DR	Mar	Don	Own	P	Pu	Au SP	SG	9 1/16	6⅜	1270	SA	2¾	10½	5	9½	7	Ele	43
Own 530	2-4 11/16x5½	190	1375	I	2	2¼	G	LP, D	DR	Mar	Don	Own	P	Pu	Own MD	SG	9 11/16	7¼	1325	FK	4	18	7	16		Ele	44
Own 630	2-5½x6⅜	303	1125	I	2	2¾	G	LP, D	DR	Mar	Don	Own	P	Pu	Own MD	SG	12 11/16	7⅜	1125	FK	6½	22¼	8	24		Ele	45
Own 630	2-5½x6⅜	303	1125	I	2	2¾	G	LP, D	DR	Mar	Don	Own	P	Pu	Own MD	SG	12 11/16	7⅜	1125	SA	6½	22¼	8	24		Ele	46
Own 630	2-5½x6⅜	303	1125	I	2	2¾	G	LP, D	DR	Mar	Don	Own	P	Pu	Own MD	CH	12 11/16	7⅜	1125	DA	6½	22¼	8	24	*1¾	Ele	47
Own 620	2-5½x6⅜	303	1125	I	2	2¾	G	LP, D	DR	Mar	Don	Own	P	Pu	Own MD	SG	12 11/16	7⅜	1125	SA	7	20	8	24		Ele	48
Own 730	2-6x6⅜	361	1125	I	2	3¼	G	LP, D	DR	Mar	Don	Own	P	Pu	Own MD	SG	12⅞	7⅜	1125	FK	7⅛	26½	10	32		Ele	49
Own 730	2-6x6⅜	361	1125	I	2	3¼	G	LP, D	DR	Mar	Don	Own	P	Pu	Own MD	SG	12⅞	7⅜	1125	SA	7⅛	26½	10	32		Ele	50
Own 730	2-6x6⅜	361	1125	I	2	3¼	G	LP, D	DR	Mar	Don	Own	P	Pu	Own MD	CH	12⅞	7⅜	1125	DA	7⅛	26½	10	32	*1¾	Ele	51
Own 730	2-6⅛x6⅜	376	1125	I	3	5	O		N	B-S	Don	Own	P	Pu	Own MD	SG	12⅞	7⅜	1125	FK	7	20	9	32		GS	52
Own 730	2-6⅛x6⅜	376	1125	I	3	5	O		N	B-S	Don	Own	P	Pu	Own MD	SG	12⅞	7⅜	1125	SA	7	20	9	32		GS	53
Own 730	2-6⅛x6⅜	376	1125	I	3	5	O		N	B-S	Don	Own	P	Pu	Own MD	CH	12⅞	7⅜	1125	DA	7	20	9	32	*1¾	GS	54
Own 830	2-6⅛x8	471	1125	I	3	4½	O		N	B-S	Don	Own	P	Pu	Own MD	SG	12 1/32	9	1125	SA	8¾	32½	14	13		GS	55
Cont Z134	4-3 5/16x3⅞	134	2000	I	3	2¼	G		DR	Mar	Don	Nov	P	Pu	Roc SP	SB	9	6½	1358	DA	2¼	14	5	32	(a)	Ele	56
Cont Z134	4-3 5/16x3⅞	134	2000	I	3	2¼	G		DR	Mar	Don	Nov	P	Pu	Roc SP	SB	9	6½	1358	DA	2¼	14	5	32	(a)	Ele	57
Cont Z134	4-3 5/16x3⅞	134	2000	I	3	2¼	G		DR	Mar	Don	Nov	P	Pu	Au DSP	SB	9	6½	1358	DA	2¼	14	5	32	(a)	Ele	58
Std 23C	4-3 5/16x4	138	2000	I	3	2¾	O		N	Luc	Don	Luc	P	Pu	Au DSP	SB	9	6½	1358	DA	2¼	11	5	32	(a)	Ele	59
Own	4-3 7/16x3 39/64	134	2000	I	3	2½	G	K, LP	Own	Mar	Don	N-P	P	Pu	Lo SP	IG				DA	3¾	13	5	6	8	Ele	60
Own	4-3 7/16x3 39/64	134	2000	I	3	2½	G	K, LP	Own	Mar	Don	N-P	P	Pu	Lo SP	IG				DA	3¾	13	5	6	8	Ele	61
Own	4-3 7/16x3 39/64	134	2000	I	3	2½	G	K, LP	Own	Mar	Don	N-P	P	Pu	Lo SP	IG	9	6½	1360	DA	3¾	13	5	6	8	Ele	62
Own	4-3 7/16x3 39/64	134	2000	I	3	2½	G	K, LP	Own	Mar	Don	N-P	P	Pu	Lo SP	IG	9	6½	1279	DA	3¾	13	5	8	8	Ele	63
Own	4-3 7/16x3 39/64	134	2000	I	3	2½	G	K, LP	Own	Mar	Don	N-P	P	Pu	Lo DP	IG	9	6½	1279	DA	3¾	13	5	8	8	Ele	64
Own	4-3 7/16x3 39/64	134	2000	I	3	2½	G	K, LP	Own	Mar	Don	N-P	P	Pu	Lo SP	IG	9	6½	1360	SA	3¾	13	5	8	11	Ele	65
Own	4-3 29/32x3 39/64	172	2200	I	3	2½	G	K, LP	Own	Mar	Don	N-P	P	Pu	Lo SP	IG				DA	3¾	13	5	6	11	Ele	66
Own 172	4-3 29/32x3 39/64	172	2200	I	3	2½	G	LP, K	Own	Mar	Don	N-P	P	Pu	Lo SP	IG	9	6½	1360	DA	3¾	17	5	6	11	Ele	67
Own	4-3 29/32x3 39/64	172	2200	I	3	2½	G	K, LP	Own	Mar	Don	N-P	P	Pu	Lo SP	IG	9	6½	1279	DA	3¾	17	5	8	11	Ele	68
Own	4-3 29/32x3 39/64	172	2200	I	3	2½	G	K, LP	Own	Mar	Don	N-P	P	Pu	Lo DP	IG	9	6½	1279	DA	3¾	17	5	8	11	Ele	69
							G	LP																			70
Own	4-3 29/32x3 39/64	172	2200	I	3	2½	G	K, LP	Own	Mar	Don	N-P	P	Pu	Lo SP	IG	9	6½	1279	SA	3¾	17	5	8	11	Ele	71
Own	4-3 29/32x3 39/64	172	2200	I	3	2½	G	K, LP	Own	Mar	Don	N-P	P	Pu	Lo DP	IG	9	6½	1279	SA	3¾	17	5	8	11	Ele	72
Own 172	4-3 29/32x3 39/64	172	2200	I	3	2½	G	K, LP	Own	Mar	Don	N-P	P	Pu	Lo DP	IG	9	6½	1279	SA	3¾	17	5	8	11	Ele	73
Own 172	4-3 29/32x3 39/64	172	2200	I	3	2½	G	K, LP	Own	Mar	Don	N-P	P	Pu	Lo DP	IG	9	6½	1279	SA	3¾	17	5	8	11	Ele	74
Own	4-3 29/32x3 39/64	172	2200	I	3	2½	O		N	Ros	Don	N-P	P	Pu	Lo SP	IG				DA	3¾	17	5	8½	11½	Ele	75
Own 172	4-3 29/32x3 39/64	172	2200	I	3	2½	O		N		Don	N-P	P	Pu	Lo SP	IG	9	6½	1360	DA	3¾	17	5	8½	11½	Ele	76
Own	4-3 29/32x3 39/64	172	2200	I	3	2½	O		N		Don	N-P	P	Pu	Lo SP	IG	9	6½	1279	DA	3¾	17	5	8½	11½	Ele	77
Own	4-3 29/32x3 39/64	172	2200	I	3	2½	O		N		Don	N-P	P	Pu	Lo DP	IG	9	6½	1279	DA	3¾	17	5	8½	11½	Ele	78
		172	2200				O		N	Ros											3¾	17	5	8½	11½		79
Own	4-3 29/32x3 39/64	172	2200	I	3	2½	O		N		Don	N-P	P	Pu	Lo SP	IG	9	6½	1279	SA	3¾	17	5	8½	11½	Ele	80
Own	4-3 29/32x3 39/64	172	2200	I	3	2½	O		N		Don	N-P	P	Pu	Lo DP	IG	9	6½	1279	SA	3¾	17	5	8½	11½	Ele	81
Own 172	4-3 29/32x3 39/64	172	2200	I	3	2½	O		N		Don	N-P	P	Pu	Lo DP	IG	9	6½	1279	SA	3¾	17	5	8	11	Ele	82
Own 172	4-3 29/32x3 39/64	172	2200	I	3	2½	O		N		Don	N-P	P	Pu	Lo DP	IG	9	6½	1279	SA	3¾	17	5	8	11	Ele	83

For Key to References and Abbreviations See Pages 136 and 137

For Directory of Tractor Manufacturers listed above, see Table of Contents

1959 MODELS OF TRACTORS . . .

Line Number	Tractor Make and Model	General: Wheelbase (In.)	General: Minimum Turning Radius Outside (Ft.)	General: Ground Clearance (In.)	General: Shipping Weight with Rubber Tires (Lb.)	General: Tread (In.) Minimum	General: Tread (In.) Maximum	Draw-Bar: Lateral Adjustment (In.)	Draw-Bar: Height Above Ground (In.)	Overall Dimensions: Length (In.)	Overall Dimensions: Width (In.)	Overall Dimensions: Height—To Highest Point (In.)	Tire Size (In.): Front	Tire Size (In.): Rear	H.P. Rating: Belt	H.P. Rating: Drawbar	Nebraska Test Number	Power Take-Off	Forward Travel Speeds at Normal Governed Engine RPM with Standard Wheels: No. of Speeds	Forward: Range (MPH)	Reverse Travel Speeds at Normal Governed Engine RPM with Standard Wheels: No. of Speeds	Reverse: Range (MPH)
1	International ..... Cub Lo-Boy	62	8	14	1600	40	56	22¾	Ad	97	48	56	4.00/12	8/24	10.75	10.06	575	Op	3	2.40-7.30	1	2.70
2	140	71	8½	22	2720	40	68	18¾	Ad	107	56	82	5.00/15	9/24	24.27	22.18	666	Op	4	1.90-12.80	1	3.10
3	240-U	75	10½	13	3140	48	76	18¾	Ad	116	63	56	5.50/16	11/24	32.24	28.91	668	Op	4	1.80-11.80	1	2.80
4	340-U	74	9	13	3770	48	76	18	Ad	116	63	60	5.50/16	12.40/28	35.24	32.41	634	Op	10	1.20-16.10	2	1.50-2.20
5	460-U	78¾	10⅓	19	4410	48	76	18	Ad	128	64	61	5.50/16	11/28	51.64	48.15	674	Op	10	1.20-16.50	2	1.50-2.30
6	460D-U	78¾	10⅓	19	4590	48	76	18	Ad	128	64	61	5.50/16	11/28	52.43	48.16	673	Op	10	1.80-16.50	2	1.50-2.30
7	560	85½	12	15	5800	58	70	18	Ad	146	74½	95	6.50/18	14/30	65.00	59.00	NT	Op	10	1.40-16.20	2	1.90-2.10
8	560D	85½	12	15	5980	58	70	18	Ad	146	74½	95	6.50/18	14/30	62.00	57.00	NT	Op	10	1.40-16.20	2	1.90-2.70
9	660	85½	12½	16	7250	60	80	18¾	Ad	144	78	100½	7.50/18	15/34	75.00	68.00	NT	Op	10	1.50-16.50	2	1.90-2.80
10	660D	85½	12½	16	7430	60	80	18¾	Ad	144	78	100½	7.50/18	15/34	75.00	68.00	NT	Op	10	1.50-16.50	2	1.90-2.80
11	Massey-Ferguson MF-202 Ind.	75	8	13	2645	48	76	N	N	113 11/16	63½	55	6.00/16	11/28	......	......	NT	St	6	1.23-13.49	2	1.64-6.55
12	MF-202 Ind. Std.	75	8	13	2860	48	76	17 3/64	Ad	119¾	63½	55	6.00/16	11/28	......	......	NT	St	6	1.23-13.49	2	1.64-6.55
13	MF-303	85½	13½	11⅝	5260	64¼	64¼	19¼	Ad	133	78¾	....	7.50/15	13/24	49.20	34.60	NT	Op	10	1.17-11.30	2	1.54-2.66
14	MF-50-Std-G	81 7/32	8	12⅝	3100	48	76	17 3/64	Ad	120	63½	57	5.50/16	11/28	28.99	23.75	595	St	6	1.33-14.57	2	1.77-7.09
15	MF-50 Std. LPG	81 7/32	8	12⅝	3200	48	76	17 3/64	Ad	120	63½	57	5.50/16	11/28	28.45	23.00	658	St	6	1.33-14.57	2	1.77-7.09
16	MF-50-TS-G	85 5/16	8	18⅞	3229	48	76	17 3/64	Ad	127 1/16	63½	63¼	7.50/10	10/38	28.99	23.75	595	St	6	1.45-15.98	2	1.93-7.75
17	MF-50-TS-LPG	85 5/16	8	18⅞	3329	48	76	17¾	Ad	127 1/16	63½	63¼	7.50/10	10/38	28.45	23.06	658	St	6	1.45-15.98	2	1.93-7.75
18	MF-50-TT-G	84 5/16	8	18⅞	3195	48	76	17 3/64	Ad	127 5/16	63½	63¼	5.50/16	10/38	28.99	23.75	595	St	6	1.45-15.98	2	1.93-7.75
19	MF-50-TT-LPG	84 5/16	8	18⅞	3295	48	76	17¾	Ad	127 5/16	63½	63¼	5.50/16	10/38	28.45	23.06	658	St	6	1.45-15.98	2	1.93-7.75
20	MF-65-Std-G	84	9½	20 11/64	3513	52	88	17⅜	13⅞	131	72	57	6.00/16	12/28	40.72	32.66	659	St	6	1.25-13.77	2	1.70-6.82
21	MF-65-Std-LPG	84	9½	20 11/64	3648	52	88	17⅜	13⅞	131	72	57	6.00/16	12/28	38.06	30.65	657	St	6	1.25-13.77	2	1.70-6.82
22	MF-65-HC-G	84 11/32	9½	27⅛	3677	52	88	17⅜	14⅜	136	72	63⅝	6.00/16	11/38	40.72	32.66	659	St	6	1.30-14.26	2	1.77-7.06
23	MF-65-HC-LPG	84 11/32	9½	27⅛	3802	52	88	17⅜	14⅜	136	72	63⅝	6.00/16	11/38	38.06	30.65	657	St	6	1.30-14.26	2	1.77-7.06
24	MF-65-TS-G	87 27/64	9½	27⅛	3605	52	88	17⅜	14⅜	139	72	63½	7.50/10	11/38	40.72	32.66	659	St	6	1.30-14.26	2	1.77-7.06
25	MF-65-TS-LPG	87 27/64	9½	27⅛	3730	52	88	17⅜	14⅜	139	72	63½	7.50/10	11/38	38.06	30.65	657	St	6	1.30-14.26	2	1.77-7.06
26	MF-65-TT-G	86 27/64	9½	27⅛	3571	52	88	17⅜	14⅜	139	72	63⅝	5.50/16	11/38	40.72	32.66	659	St	6	1.30-14.26	2	1.77-7.06
27	MF-65-TT-LPG	86 27/64	9½	27⅛	3696	52	88	17⅜	14⅜	139	72	63⅝	5.50/16	11/38	38.06	30.65	657	St	6	1.30-14.26	2	1.77-7.06
28	McCormick ..... Cub	69	8¼	20	1600	40	56	22¾	Ad	99	48	63	4.00/12	8/24	10.75	10.06	575	Op	3	2.40-7.30	1	2.70
29	140	71	8½	22	2720	40	68	18¾	Ad	107	56	82	5.00/15	9/24	24.27	22.18	666	Op	4	1.90-12.80	1	3.10
30	140HC	72	8¾	27	2870	48	68	18¾	Ad	115	61	89	4.00/19	9/36	24.00	22.00	NT	Op	4	2.60-16.80	1	4.00
31	240	82	7½	23¼	3340	48	80	18¾	Ad	121	81	88	5.00/15	11.20/36	32.22	28.87	667	Op	4	2.20-14.70	1	3.50
32	340	80	7¼	24½	4250	48	92	18	Ad	120	84	91	5.00/15	12.40/36	36.12	32.68	665	Op	10	1.20-16.60	2	1.50-2.30
33	460	95	9	25½	4900	48	93	18	Ad	139½	83½	95	5.50/16	12.40/38	51.63	47.24	670	Op	10	1.70-16.60	2	2.20-3.20
34	460D	95	9	25½	5080	48	93	18	Ad	139½	83½	95	5.50/16	12.40/38	52.19	47.99	672	Op	10	1.70-16.60	2	2.20-3.20
35	460HC	100½	12	34	5620	62	74	30	Ad	154	85¾	107	6.00/20	11/38	51.50	47.00	NT	Op	10	1.70-15.90	2	2.10-3.10
36	460DHC	100½	12	34	5800	62	74	30	Ad	154	85¾	107	6.00/20	11/38	51.50	47.00	NT	Op	10	1.70-15.90	2	2.10-3.10
37	560	96	8½	26¼	5780	50	94	18	Ad	141	84½	99½	6.00/16	12.40/38	65.25	59.47	671	Op	10	1.50-16.60	2	1.90-2.80
38	560D	96	8½	26¼	5960	50	94	18	Ad	141	84½	99½	6.00/16	12.40/38	62.60	58.67	669	Op	10	1.50-16.60	2	1.90-2.80
39	560HC	100¾	12	34	6530	62	74	30	Ad	155	85¾	112½	6.00/20	12/38	65.00	59.00	NT	Op	10	1.50-16.90	2	1.90-2.90
40	560DHC	100¾	12	34	6710	62	74	30	Ad	155	85¾	112½	6.00/20	12/38	62.00	57.00	NT	Op	10	1.50-16.90	2	1.90-2.90
41	Michigan 180TD	84	21¼	16	28800	81	81	.....	26	205	110	103	23.50/25	23.50/25	.....	165.00	.....	.....	4	0-27.0	4	0-27.0
42	280TD	106	27	15	45500	96	96	.....	26	255	123	130	26.50/25	26.50/25	.....	262.00	.....	.....	4	0-28.0	4	0-28.0
43	380TD	122	29	14	66000	106	106	.....	26	264	136	136	29.50/29	29.50/29	.....	.....	.....	.....	4	0-25.0	4	0-25.0
44	480TD	138	34	19	92000	106	112	.....	33	331	140	140	35.50/33	35.50/33	.....	.....	.....	.....	4	0-28.9	4	0-28.9
45	Minneapolis-Moline ..... Uni-L	104¼	11⅓	12	3922	83¼	83¼		.....	143½	105¼	92½	11/24	7.50/18			NT		3	2.10-10.10	1	2.00
46	335-Util.	79	9⅔	18	3070	48	76	Ad	19⅝	113½	58¼	58½	5.50/16	10/24	35.07	31.41	624	Op	5	2.72-15.09	1	4.17
47	335-U	78¼	8⅓	23	3268	48	76	Ad	20	121¼	74⅝	67⅞	5.50/16	12.40/36	35.07	31.41	624	Op	5	3.66-20.26	1	5.60
48	335-E	85⅛	10⅔	22½	3538	48	76	Ad	20	128⅛	74⅝	65½	5.50/16	12.40/36	35.07	31.41	624	Op	5	3.66-20.26	1	5.60
49	335-N	78		23	3275	48	76	Ad	20	119½	74⅝	67	5.50/16	12.40/36	35.07	31.41	624	Op	5	3.66-20.26	1	5.60
50	335-Ind.	75½	10⅔	12¾	3355	56	76	Ad	19⅝	113½	69¼	62	6.00/16	10/24	40.00	35.00	NT	Op	5	3.48-19.30	1	5.34
51	445-Util.	81⅝	10½	20	3450	56	84	Ad	12⅞	121½	69⅛	60⅝	5.50/16	13.60/28	44.19	40.24	579	Op	5	2.69-14.88	1	4.11
52	445-Util. D	81⅝	10½	20	3550	56	84	Ad	15½	121½	69⅛	60⅝	5.50/16	13.60/28	44.00	40.00	NT	Op	5	2.66-14.70	1	4.06
53	445-U	86 5/16	8⅝	25½	3530	56	88	Ad	14	130 5/16	82¼	67⅞	5.50/16	13.60/38	44.19	40.31	578	Op	5	2.78-15.40	1	4.26
54	445-E	93⅝	11⅝	22½	3830	56	88	Ad	14	137⅝	82¼	65¾	5.50/16	13.60/38	44.19	40.31	578	Op	5	2.78-15.40	1	4.26
55	445-N	86⅝		25½	3650	56	88	Ad	14	128⅝	82¼	67 5/16	5.50/16	13.60/38	44.19	40.31	578	Op	5	2.78-15.40	1	4.26
56	445-UD	86 5/16	8⅝	25½	3630	56	88	Ad	14	130 5/16	82¼	67⅞	5.50/16	11/38	44.00	40.00	NT	Op	5	3.14-17.39	1	4.81
57	445-ED	93⅝	11⅝	22½	3930	56	88	Ad	14	137⅝	82¼	65¾	5.50/16	11/38	44.00	40.00	NT	Op	5	3.14-17.39	1	4.81
58	445-ND	86⅝		25½	3750	56	88	Ad	14	128⅝	82¼	67 5/16	5.50/16	11/38	44.00	40.00	NT	Op	5	3.14-17.39	1	4.81
59	445-Ind.	77	10⅓	13	3725	56	84	Ad	15½	118½	69	63 5/16	7.50/16	12/28	44.00	40.00	NT	Op	5	2.69-14.88	1	4.11
60	445-Ind. D	77	10⅓	13	3825	56	84	Ad	15½	118½	69	63 5/16	7.50/16	12/28	44.00	40.00	NT	Op	5	2.66-14.70	1	4.06
61	5 Star Std.	90⅝		12	5770	58	67½	Ad	16¼	134	73⅝	70	6.00/16	15/30	57.00	52.00	NT	Op	10	2.57-15.71	2	3.93-4.34
62	5 Star Std. D	90⅝		12	6070	58	67½	Ad	16¼	134	73⅝	70	6.00/16	15/30	57.00	52.00	NT	Op	10	2.57-15.71	2	3.93-4.34
63	5 Star U	94		25	5570	56	88	Ad	17	140	79⅛	72	6.00/16	13.60/38	57.16	52.06	651	Op	10	2.65-16.21	2	4.05-4.48
64	5 Star E	101 5/16		22	5780	56	88	Ad	17	147	79⅛	72	6.00/16	13.60/38	57.16	52.06	651	Op	10	2.65-16.21	2	4.05-4.48
65	5 Star N	93¼		25	5450	56	88	Ad	17	137	79⅛	72	6.00/16	13.60/38	57.16	52.06	651	Op	10	2.65-16.21	2	4.05-4.48
66	5 Star UD	94		25	5870	56	88	Ad	17	140	79⅛	72	6.00/16	13.60/38	57.24	51.80	652	Op	10	2.65-16.21	2	4.05-4.48
67	5 Star ED	101 5/16		22	6080	56	88	Ad	17	147	79⅛	72	6.00/16	13.60/38	57.24	51.80	652	Op	10	2.65-16.21	2	4.05-4.48
68	5 Star ND	93¼		25	5750	56	88	Ad	17	137	79⅛	72	6.00/16	13.60/38	57.84	51.80	652	Op	10	2.65-16.21	2	4.05-4.48
69	5 Star Ind.	90⅝	16	17	6160	64	69½	16¼	14⅝	138	81½	70½	8.25/20	15/26	57.00	50.00	NT	Op	5	3.00-16.62	1	4.59
70	5 Star Ind. D	90⅝	16	17	6460	64	69½	16¼	14⅝	138	81½	70½	8.25/20	15/26	57.00	52.00	NT	Op	5	3.00-16.62	1	4.59
71	GB	82½	14	14¼	6525	66	66	16⅝	25	137⅛	83	72½	7.50/18	15/34	68.50	61.45	547	Op	5	2.70-14.70	1	2.10
72	GBD	96⅛	16⅓	14½	7400	66	66	16⅝	25	151⅜	83	72½	7.50/18	15/34	71.50	63.50	NT	Op	5	3.10-17.00	1	2.40
73	UTI Ind.	79½	16	17⅝	6010	66½	70½	15	16¼	127⅝	84½	74¾	8.25/20	15/26	50.38	45.43	NT	Op	5	2.40-13.50	1	1.90
74	UTID Ind.	79½	16	17⅝	6310	66½	70½	15	16¼	127⅝	84½	74¾	8.25/20	15/26	45.00	40.00	NT	Op	5	2.40-13.50	1	1.90
75	UTIL Ind.	88	17	17⅝	6310	66½	70½	15	16¼	136	84½	74¾	8.25/20	15/26	50.38	45.43	NT	Op	6	1.80-13.50	6	1.90-13.00
76	UTILD Ind.	88	17	17⅝	6310	66½	70½	15	16¼	136	84½	74¾	8.25/20	15/26	45.00	40.00	NT	Op	6	1.80-13.50	6	1.90-13.00
77	Oliver ..... Super 55 HC	73½	10	14½	3050	48	76	20¼	Ad	120½	66¼	53 13/16	5.50/16	10/28	35.88	30.75	524	Op	6	1.61-12.56	2	2.00-4.17
78	Super 55D	73½	10	14½	3200	48	76	20¼	Ad	120½	66¼	53 13/16	5.50/16	10/28	34.09	28.97	526	Op	6	1.61-12.56	2	2.00-4.17
79	RC Super 66HC	86 13/16	8¼	18 1/16	2886	60	88	20½	Ad	134⅛	80¼	73¼	5.50/15	9/38	35.54	29.60	541	Op	6	1.88-9.54	2	2.15-3.70
80	RC Super 66D	86 13/16	8¼	18 1/16	3026	60	88	20½	Ad	134⅛	80¼	73¼	5.50/15	9/38	35.43	29.09	544	Op	6	1.88-9.54	2	2.15-3.70
81	RC Super 77HC	90 13/16	9¼	18 1/16	4226	60	92½	20⅜	Ad	139¼	80¼	75*	5.50/16	11/38	46.18	40.16	542	Op	6	2.46-11.53	2	2.59-4.52
82	Ind. Super 77HC	81¼	12½	13½		52½	69½	20½	Ad	133⅞	78⅝	70*	7.00/20	12.00/24			NT	Op	6*	1.97-15.78	2	2.07-3.61
83	RC Super 77D	90 13/16	9¼	18 1/16	4346	60	92½	20⅜	Ad	139¼	80¼	75*	5.50/16	11/38	45.94	40.04	543	Op	6	2.46-11.53	2	2.59-4.52
84	Ind. Super 77D	81¼	12½	13½		52½	69½	20½	Ad	133⅞	78⅝	70*	7.00/20	12.00/24			NT	Op	6	1.97-15.78	2	2.07-3.61
85	RC Super 88HC	93 13/16	9¾	18½	5000	60	92½	20⅜	Ad	143⅛	80¼	75*	6.00/16	12/38	58.06	49.81	525	Op	6	2.50-11.80	2	2.56-4.40

For Key to References and Abbreviations See Pages 136 and 137

For Directory of Tractor Manufacturers listed above, see Table of Contents

. . . WHEEL TYPE—*continued*

ENGINE							FUEL										BELT PULLEY				CAPACITIES						
Make and Model	Number of Cylinders—Bore and Stroke (In.)	Piston Disp. (Cu. In.)	R.P.M. at Governed Speed	Valve Arrangement	Number of Main Bearings	Diameter of Main Bearings	Standard	Optional	Ignition Make	Carburetor or Injector Pump Make	Air Cleaner Make	Governor Make	Oiling System Type	Cooling System Type	Clutch—Make and Type	Final Drive—Type	Diameter (In.)	Face (In.)	Normal R.P.M.	Steering Type	Cooling System (Gal.)	Fuel Tank (Gal.)	Crankcase (Qts.)	Transmission (Qts.)	Final Drive Case (Qts.)	Starting Method	Line Number
Own C60	4-2 5/8x2 3/4	60	1800	L	3	1 5/8	G		Own	Own	Don	Own	P	TS	A-R SP	SG	7 5/8	4 3/4	1487	FK	2 7/16	7 1/2	3	1 3/4	3	H E	1
Own C123	4-3 1/8x4	123	1400	I	3	2 1/8	G	D	Own	M-Z	D-U	Own	P	Pu	A-R SP	SG	8 1/2	6	1157	FK	3 3/4	11	5	5	3	Ele	2
Own C123	4-3 1/8x4	123	2000	I	3	2 1/8	G	D	Own	M-Z	D-U	Own	P	Pu	A-R SP	SG	7	6	1652	FK	3 3/4	16 1/4	5	20		Ele	3
Own C135	4-3 1/4x4 1/16	135	2000	I	3	2 1/4	G		Own	M-Z	Don	Own	P	Pu	Own SP	SG	11	7 1/2	1082	FK	3 1/2	15 1/4	5	40		Ele	4
Own C221	6-3 9/16x3 11/16	221	1800	I	4	2 3/4	G	LP	Own	Own	D-U	Own	P	Pu	O-R SP	SG	11	7 1/2	1078	FK	4 3/8	23	9	40		Ele	5
Own D236	6-3 11/16x3 11/16	236	1800	I	4	2 3/4	O		N	Ros	D-U	Ros	P	Pu	O-R SP	SG	11	7 1/2	1078	FK	5 1/2	23	9	40		Ele	6
Own C263	6-3 9/16x4 25/64	263	1800	I	4	2 3/4	G	LP	Own	Own	Don	Own	P	Pu	O-R SP	SG	11	7 1/2	1042	FK	4	33	9	64		Ele	7
Own D282	6-3 11/16x4 25/64	282	1800	I	4	2 3/4	O		N	Ros	D-U	Ros	P	Pu	O-R SP	SG	11	7 1/2	1042	FK	5 1/8	33	9	64		Ele	8
Own C263	6-3 9/16x4 25/64	263	2400	I	4	2 3/4	G	LP	Own	Own	Don	Own	P	Pu	O-R SP	PL	11	7 1/2	1054	FK	4	33	9	64	6	Ele	9
Own D282	6-3 11/16x4 25/64	282	2400	I	4	2 3/4	O		N	Ros	D-U	Ros	P	Pu	O-R SP	PL	11	7 1/2	1054	FK	5	33	9	64	6	Ele	10
Cont Z134	4-3 5/16x3 7/8	134	2000	I	3	2 1/4	G		DR	Mar	Don	Nov	P	Pu	Roc SP	SB	9	6 1/2	1358	SA	2 1/4	14	5	36		Ele	11
Cont Z134	4-3 5/16x3 7/8	134	2000	I	3	2 1/4	G		DR	Mar	Don	Nov	P	Pu	Roc SP	SB	9	6 1/2	1358	SA	2 1/4	14	5	32		Ele	12
Own E208	4-3 11/16x4 7/8	208	2000	I	3	2 5/8	G		AL	Mar	Don	Own	P	Pu	TC	SG	13 1/2	6 1/2	876	FK	5 3/4	23	7	52	(a)	Ele	13
Cont Z134	4-3 5/16x3 7/8	134	2000	I	3	2 1/4	G		DR	Mar	Don	Nov	P	Pu	Au DSP	SB	9	6 1/2	1358	Ad	2 1/4	17	5	32	(a)	Ele	14
Cont ZB134	4-3 5/16x3 7/8	134	2000	I	3	2 1/4	LP		DR	Zen	Don	Nov	P	Pu	Au DSP	SB	9	6 1/2	1358	Ad	2 1/4	16	5	32	(a)	Ele	15
Cont Z134	4-3 5/16x3 7/8	134	2000	I	3	2 1/4	G		DR	Mar	Don	Nov	P	Pu	A-R DSP	SB	9	6 1/2	1358	FO	2 1/4	17	5	32	(a)	Ele	16
Cont ZB134	4-3 5/16x3 7/8	134	2000	I	3	2 1/4	LP		DR	Zen	Don	Nov	P	Pu	A-R DSP	SB	9	6 1/2	1358	SA	2 1/4	17	5	32	(a)	Ele	17
Cont Z134	4-3 5/16x3 7/8	134	2000	I	3	2 1/4	G		DR	Mar	Don	Nov	P	Pu	A-R DSP	SB	9	6 1/2	1358	FO	2 1/4	17	5	32	(a)	Ele	18
Cont ZB134	4-3 5/16x3 7/8	134	2000	I	3	2 1/4	LP		DR	Zen	Don	Nov	P	Pu	A-R DSP	SB	9	6 1/2	1358	SA	2 1/4	17	5	32	(a)	Ele	19
Cont G176	4-3 27/64x4 7/8	176	2000	I	3	2 3/8	G		DR	Mar	Don	Nov	P	Pu	Au DSP	SG	9	6	1356	FK	2 1/2	17	5	32	3/4	Ele	20
Cont G176	4-3 27/64x4 7/8	176	2000	I	3	2 3/8	LP		DR	Zen	Don	Nov	P	Pu	Au DSP	SG	9	6	1356	FK	2 1/2	17	5	32	3/4	Ele	21
Cont G176	4-3 27/64x4 7/8	176	2000	I	3	2 3/8	G		DR	Mar	Don	Nov	P	Pu	Au DSP	SG	9	6	1356	FK	2 1/2	17	5	32	3/4	Ele	22
Cont G176	4-3 27/64x4 7/8	176	2000	I	3	2 3/8	LP		DR	Zen	Don	Nov	P	Pu	Au DSP	SG	9	6	1356	FK	2 1/2	17	5	32	3/4	Ele	23
Cont G176	4-3 27/64x4 7/8	176	2000	I	3	2 3/8	G		DR	Mar	Don	Nov	P	Pu	Au DSP	SG	9	6	1356	FO	2 1/2	17	5	32	3/4	Ele	24
Cont G176	4-3 27/64x4 7/8	176	2000	I	3	2 3/8	LP		DR	Zen	Don	Nov	P	Pu	Au DSP	SG	9	6	1356	FO	2 1/2	17	5	32	3/4	Ele	25
Cont G176	4-3 27/64x4 7/8	176	2000	I	3	2 3/8	G		DR	Mar	Don	Nov	P	Pu	Au DSP	SG	9	6	1356	SA	2 1/2	17	5	32	3/4	Ele	26
Cont G176	4-3 27/64x4 7/8	176	2000	I	3	2 3/8	LP		DR	Zen	Don	Nov	P	Pu	Au DSP	SG	9	6	1356	SA	2 1/2	17	5	32	3/4	Ele	27
Int C60	4-2 5/8x2 3/4	60	1800	L	3	1 5/8	G		Int	Int	Don	Int	P	TS	A-R SP	SG	7 5/8	4 3/4	1487	FK	2 7/16	7 1/2	3	1 3/4	1 3/4	H E	28
Int C123	4-3 1/8x4	123	1400	I	3	2 1/8	G	D	Int	M-Z	D-U	Int	P	Pu	A-R SP	SG	8 1/2	6	1157	FK	3 3/4	11	5	5	3	Ele	29
Int C123	4-3 1/8x4	123	1400	I	3	2 1/8	G	D	Int	M-Z	D-U	Int	P	Pu	A-R SP	SG	8 1/2	6	1157	FK	3 3/4	11	5	5	3	Ele	30
Int C123	4-3 1/8x4	123	2000	I	3	2 1/8	G	D	Int	M-Z	D-U	Int	P	Pu	A-R SP	SG	7	6	1652	SA	3 3/4	16 1/4	5	20	N	Ele	31
Int C135	4-3 1/4x4 1/16	135	2000	I	3	2 1/4	G		Int	M-Z	Don	Int	P	Pu	Int SP	SG	11	7 1/2	1082	SA	3 1/2	15 1/4	5	40	N	Ele	32
Int C221	6-3 9/16x3 11/16	221	1800	I	4	2 3/4	G	LP	Int	Int	Don	Int	P	Pu	I-R SP	SG	11	7 1/2	1078	SA	4 1/8	33	9	40	N	Ele	33
Int D236	6-3 11/16x3 11/16	236	1800	I	4	2 3/4	O		N	Ros	D-U	Ros	P	Pu	I-R SP	SG	11	7 1/2	1078	SA	5 1/4	33	9	40	N	Ele	34
Int C221	6-3 9/16x3 11/16	221	1800	I	4	2 3/4	G	LP	Int	Int	Don	Int	P	Pu	I-R SP	CH	11	7 1/2	1078	FK	4 1/8	33	9	40	6	Ele	35
Int D236	6-3 11/16x3 11/16	236	1800	I	4	2 3/4	O		N	Ros	D-U	Ros	P	Pu	I-R SP	CH	11	7 1/2	1078	FK	5 1/4	33	9	40	6	Ele	36
Int C263	6-3 9/16x4 25/64	263	1800	I	4	2 3/4	G	LP	Int	Int	Don	Int	P	Pu	I-R SP	SG	11	7 1/2	1042	SA	4	33	9	64	N	Ele	37
Int D282	6-3 11/16x4 25/64	282	1800	I	4	2 3/4	O		N	Ros	D-U	Ros	P	Pu	I-R SP	SG	11	7 1/2	1042	SA	5 1/8	33	9	64	N	Ele	38
Int C263	6-3 9/16x4 25/64	263	1800	I	4	2 3/4	G	LP	Int	Int	Don	Int	P	Pu	I-R SP	CH	11	7 1/2	1042	FK	4	33	9	64	6	Ele	39
Int D282	6-3 11/16x4 25/64	282	1800	I	4	2 3/4	O		N	Ros	D-U	Ros	P	Pu	I-R SP	CH	11	7 1/2	1042	FK	5 1/8	33	9	64	6	Ele	40
Cum JT6B1	6-4 1/8x5	401	2200		7	3 7/8	O		N	Cum			P	Pu	Cla TC	IG				DA		50				Ele	41
Cum NTO6B1	6-5 1/8x6	743	2100		7		O		N	Cum			P	Pu	Cla TC	IG				DA		120				Ele	42
Cum NFT6B1	6-5 1/8x6	743	2300		7		O		N	Cum			P	Pu	Cla TC	IG				DA		150				Ele	43
Cum VT12	12-5 1/8x6	1486	2100		7		O		N	Cum				Pu	Cla TC	IG				DA		200				Ele	44
Own V206B	4-3 5/8x5	206	1550	I	2		G		DR	Mar	Don	Own	P	Pu	Own	SG				FO	4 3/4	14	6	10	(a)	Ele	45
Own 165A	4-3 5/8x4	165	1600	I	3	(b)	G	LP	DR	Mar	Don	Nov	P	Pu	Roc SP	SG	8 5/8	6 1/2	1420	Ad	2 3/4	14	6	24	(a)	Ele	46
Own 165A	4-3 5/8x4	165	1600	I	3	(b)	G	LP	DR	Mar	Don	Nov	P	Pu	Roc SP	SG	8 5/8	6 1/2	1420	SA	2 3/4	14	6	24	(a)	Ele	47
Own 165A	4-3 5/8x4	165	1600	I	3	(b)	G	LP	DR	Mar	Don	Nov	P	Pu	Roc SP	SG	8 5/8	6 1/2	1420	Ad	2 3/4	14	6	24	(a)	Ele	48
Own 165A	4-3 5/8x4	165	1600	I	3	(b)	G	LP	DR	Mar	Don	Nov	P	Pu	Roc SP	SG	8 5/8	6 1/2	1420	FO	2 3/4	14	6	24	(a)	Ele	49
Own 165A	4-3 5/8x4	165	1900	I	3	(b)	G		DR	Mar	Don	Nov	P	Pu	Roc SP	SG	8 5/8	6 1/2	1800	FK	2 3/4	14	6	24	(a)	Ele	50
Own 206H	4-3 5/8x5	206	1550	I	3	(b)	G	LP, TF	DR	Mar	Don	Nov	P	Pu	Roc SP	SG	8 5/8	6 1/2	1470	Ad	3 3/8	14	6	32	(a)	Ele	51
Own D206	4-3 5/8x5	206	1750	I	3	(b)	O		N	Bos	Don	Bos	P	Pu	Roc SP	SG	8 5/8	6 1/2	1660	Ad	3 3/8	14	6	32	(a)	Ele	52
Own 206H	4-3 5/8x5	206	1550	I	3	(b)	G	LP, TF	DR	Mar	Don	Nov	P	Pu	Roc SP	SG	8 5/8	6 1/2	1470	SA	3 3/8	17	6	32	(a)	Ele	53
Own 206H	4-3 5/8x5	206	1550	I	3	(b)	G	LP, TF	DR	Mar	Don	Nov	P	Pu	Roc SP	SG	8 5/8	6 1/2	1470	Ad	3 3/8	17	6	32	(a)	Ele	54
Own 206H	4-3 5/8x5	206	1550	I	3	(b)	G	LP, TF	DR	Mar	Don	Nov	P	Pu	Roc SP	SG	8 5/8	6 1/2	1470	FO	3 3/8	17	6	32	(a)	Ele	55
Own D206	4-3 5/8x5	206	1750	I	3	(b)	O		N	Bos	Don	Bos	P	Pu	Roc SP	SG	8 5/8	6 1/2	1660	SA	3 3/8	17	6	32	(a)	Ele	56
Own D206	4-3 5/8x5	206	1750	I	3	(b)	O		N	Bos	Don	Bos	P	Pu	Roc SP	SG	8 5/8	6 1/2	1660	Ad	3 3/8	17	6	32	(a)	Ele	57
Own D206	4-3 5/8x5	206	1750	I	3	(b)	O		N	Bos	Don	Bos	P	Pu	Roc SP	SG	8 5/8	6 1/2	1660	FO	3 3/8	17	6	32	(a)	Ele	58
Own 206H	4-3 5/8x5	206	1550	I	3	(b)	G	LP, TF	DR	Mar	Don	Nov	P	Pu	Roc SP	SG	8 5/8	6 1/2	1470	FK	3 3/8	14	6	32	(a)	Ele	59
Own D206	4-3 5/8x5	206	1750	I	3	(b)	O		N	Bos	Don	Bos	P	Pu	Roc SP	SG	8 5/8	6 1/2	1660	FK	3 3/8	14	6	32	(a)	Ele	60
Own 283E	4-4 1/4x5	283	1500	I	3	2 29/32	G	LP, TF	DR	Mar	Don	Nov	P	Pu	Roc SP	SG	12	7	1090	FK	5 1/2	22 1/2	9	56	(a)	Ele	61
Own D336	4-4 5/8x5	336	1450	I	3	2 29/32	O		N	Bos	Don	Bos	P	Pu	Roc SP	SG	12	7	1054	FK	5 1/2	22 1/2	9	56	(a)	Ele	62
Own 283E	4-4 1/4x5	283	1500	I	3	2 29/32	G	LP, TF	DR	Mar	Don	Nov	P	Pu	Roc SP	SG	12	7	1090	SA	5 1/2	22 1/2	9	56	(a)	Ele	63
Own 283E	4-4 1/4x5	283	1500	I	3	2 29/32	G	LP, TF	DR	Mar	Don	Nov	P	Pu	Roc SP	SG	12	7	1090	Ad	5 1/2	22 1/2	9	56	(a)	Ele	64
Own 283E	4-4 1/4x5	283	1500	I	3	2 29/32	G	LP, TF	DR	Mar	Don	Nov	P	Pu	Roc SP	SG	12	7	1090	FO	5 1/2	22 1/2	9	56	(a)	Ele	65
Own D336	4-4 5/8x5	336	1450	I	3	2 29/32	O		N	Bos	Don	Bos	P	Pu	Roc SP	SG	12	7	1054	SA	5 1/2	22 1/2	9	56	(a)	Ele	66
Own D336	4-4 5/8x5	336	1450	I	3	2 29/32	O		N	Bos	Don	Bos	P	Pu	Roc SP	SG	12	7	1054	Ad	5 1/2	22 1/2	9	56	(a)	Ele	67
Own D336	4-4 5/8x5	336	1450	I	3	2 29/32	O		N	Bos	Don	Bos	P	Pu	Roc SP	SG	12	7	1054	FO	5 1/2	22 1/2	9	56	(a)	Ele	68
Own 283E	4-4 1/4x5	283	1500				G	LP	DR	Mar	Don	Nov	P	Pu	Roc SP	SG	12	7	1090	FK	5 1/2	22 1/2	9	44	(a)	Ele	69
Own D336	4-4 5/8x5	336	1450	I	3	2 29/32	O		N	Bos	Don	Bos	P	Pu	Roc SP	SG	12	7	1054	FK	5 1/2	22 1/2	9	44	(a)	Ele	70
Own 403C	4-4 5/8x6	403	1300	I	3	2 29/32	G	LP, TF	DR	Mar	Don	Own	P	Pu	TD DP	SG	16	7	741	FK	12	29	9	52	(a)	Ele	71
Own D425	6-4 1/4x5	425	1500	I	4	2 29/32	O		N	Bos	Don	Bos	P	Pu	TD DP	SG	16	7	741	FK	12 1/2	29	14	52	(a)	Ele	72
Own 283B	4-4 1/4x5	283	1300	I	3	2 29/32	G		DR	Mar	Uni	Own	P	Pu	Roc SP	SG	16	7	741	FK	6	21	9	52	(a)	Ele	73
Own D283	4-4 1/4x5	283	1300	I	3	2 29/32	O		N	Bos	Don	Bos	P	Pu	Roc SP	SG	16	7	741	FK	6	21	15	52	(a)	Ele	74
Own 283B	4-4 1/4x5	283	1300	I	3	2 29/32	G		DR	Mar	Uni	Own	P	Pu	Roc SP	SG	16	7	741	FK	6	21	9	54	(a)	Ele	75
Own D283	4-4 1/4x5	283	1300	I	3	2 29/32	O		N	Bos	Don	Bos	P	Pu	Roc SP	SG	16	7	741	FK	6	21	15	54	(a)	Ele	76
Own 55HC	4-3 1/2x3 3/4	144	1750	I	3	2 1/4	G		DR	Mar	Don	Own	PS	Pu	Au SP	SG	9	6 1/2	1319	FK	3 1/2	13	4	20	(a)	Ele	77
Own 55D	4-3 1/2x3 3/4	144	1750	I	3	2 1/4	O		N	Bos	Don	Bos	PS	Pu	Au SP	SG	9	6 1/2	1319	FK	3 1/2	13	4	20	(a)	Ele	78
Own 66HC	4-3 1/2x3 3/4	144	1600	I	3	2 1/4	G		DR	Mar	Don	Own	PS	Pu	BB SP	SG	9 1/2	7 1/4	1232	SA	3 1/2	12 3/4	4	18	(a)	Ele	79
Own 66D	4-3 1/2x3 3/4	144	1600	I	3	2 1/4	O		N	Bos	Don	Bos	PS	Pu	BB SP	SG	9 1/2	7 1/4	1232	SA	3 1/2	12 3/4	4	18	(a)	Ele	80
Own 77HC	6-3 1/2x3 3/4	216	1600	I	4	2 1/4	G		DR	M-Z	Don	Own	PS	Pu	BB SP	SG	11 7/8	7 1/4	992	SA	4 1/2	16 3/4	5	18	(a)	Ele	81
Own 77HC	6-3 1/2x3 3/4	216	1600	I	4	2 1/4	G		DR	M-Z	Don	Own	PS	Pu	BB SP	SG	11 7/8	7 1/4	992	FK	4 1/2	16 3/4	5	18	(a)	Ele	82
Own 77D	6-3 1/2x3 3/4	216	1600	I	4	2 1/4	O		N	Bos	Don	Bos	PS	Pu	BB SP	SG	11 7/8	7 1/4	992	SA	4 1/2	17	5	18	(a)	Ele	83
Own 77D	6-3 1/2x3 3/4	216	1600	I	4	2 1/4	O		N	Bos	Don	Bos	PS	Pu	BB SP	SG	11 7/8	7 1/4	992	FK	4 1/2	17	5	18	(a)	Ele	84
Own 88HC	6-3 3/4x4	265	1600	I	4	2 5/8	G		DR	M-Z	Don	Own	PS	Pu	BB SP	SG	11 7/8	7 1/4	992	SA	4 1/2	20 1/2	6	18	(a)	Ele	85

For Key to References and Abbreviations See Pages 136 and 137

For Directory of Tractor Manufacturers listed above, see Table of Contents

1959 MODELS OF TRACTORS . . .

Line Number	Tractor Make and Model	General: Wheelbase (In.)	General: Minimum Turning Radius Outside (Ft.)	General: Ground Clearance (In.)	General: Shipping Weight with Rubber Tires (Lb.)	General: Tread (In.) Minimum	General: Tread (In.) Maximum	Draw-Bar: Lateral Adjustment (In.)	Draw-Bar: Height Above Ground (In.)	Overall Dimensions: Length (In.)	Overall Dimensions: Width (In.)	Overall Dimensions: Height—To Highest Point (In.)	Tire Size (In.): Front	Tire Size (In.): Rear	H.P. Rating: Belt	H.P. Rating: Drawbar	Nebraska Test Number	Power Take-Off	Forward Travel Speeds at Normal Governed Engine RPM with Standard Wheels: No. of Speeds	Forward: Range (MPH)	Reverse Travel Speeds at Normal Governed Engine RPM with Standard Wheels: No. of Speeds	Reverse: Range (MPH)
	Oliver (contd.)																					
1	Ind. Super 88HC	82 11/16	12 1/2	12 1/2		54	68	20 1/2	Ad	135 11/16	81 1/2	70 3/4•	7.00/20	13.00/24			NT	Op	6	2.01-16.05	2	2.06-3.54
2	RC Super 88D	93 11/16	9 3/4	18 1/2	5100	60	92 1/2	20 3/8	Ad	143 9/16	80 1/4	75•	6.00/16	12/38	55.63	49.58	527	Op	6	2.50-11.80	2	2.56-4.40
3	Ind. Super 88D	82 11/16	12 1/2	11 7/16		54	68	20 1/2	Ad	135 11/16	81 1/2	70 3/4•	7.00/20	13.00/24			NT	Op	6	2.01-16.05	2	2.06-3.54
4	Super 44	73 5/8	8 11/12	21 1/2	2100	40	68	12 7/8	15	116 3/4	78	69 7/8	4.00/15	9/24	25.00	21.00	NT	Op	4	2.09-11.40	1	2.43
5	550HC	73 1/2	10	14 1/2	3000	48	76	20 7/16	Ad	120 1/2	87	53 3/4	5.50/16	10/28				Op	6	1.92-14.88	2	2.00-4.17
6	550DSL	73 1/2	10	14 1/2	3100	48	76	20 7/16	Ad	120 1/2	87	53 3/4	5.50/16	10/28				Op	6	1.92-14.88	2	2.00-4.17
7	RC 770HC	92 11/16	9 3/4	18 1/16	4428	60	92 1/2	20 3/8	Ad	141 1/2	80 1/4	75	5.50/16	12.40/38	51.63	45.05	648	Op	6	1.64-11.04	2	2.48-4.33
8	RC 770DSL	92 11/16	9 3/4	18 1/16	4620	60	92 1/2	20 3/8	Ad	141 1/2	80 1/4	75	5.50/16	12.40/38	50.71	46.04	649	Op	6	1.64-11.04	2	2.48-4.33
9	RC 880HC	94 1/16	12 1/2	18 1/2	5100	60	92 1/2	20 3/8	Ad	143 11/16	80 1/4	76	6.00/16	13.60/38	69.21	56.29	697	Op	6	1.57-13.05	2	2.39-4.46
10	RC 880DSL	94 1/16	12 1/2	18 1/2	5200	60	92 1/2	20 3/8	Ad	143 11/16	80 1/4	76	6.00/16	13.60/38	61.85	54.97	650	Op	6	1.57-13.05	2	2.39-4.46
11	RC 660HC	86 11/16		18 1/16	3128	60	88	20 1/2	Ad	134 7/16	80 1/4	73 1/4	5.50/15	10/38				Op	6	2.35-11.92	2	2.69-4.62
12	RL 660DSL	86 11/16		18 1/16	3178	60	88	20 1/2	Ad	134 7/16	80 1/4	73 1/4	5.50/15	10/38				Op	6	2.35-11.92	2	2.69-4.62
13	950HC	80			6900	66	66		Ad	142 5/16	84 3/4		7.50/18	14/34				Op	6	2.56-13.35	2	2.81-4.98
14	950DSL	80			7000	66	66		Ad	142 5/16	84 3/4		7.50/18	14/34	70.32	64.68	660	Op	6	2.56-13.35	2	2.81-4.98
15	990GM	80			7960	66	66		Ad	142 5/16	84 3/4		7.50/18	15/34	88.46	81.20	661	Op	6	2.56-13.35	2	2.81-4.98
16	995GM	80			8185	66	66		Ad	142 5/16	84 3/4		7.50/18	15/34	89.39	74.54	662	Op	6	.900-13.80	2	1.00-5.20
17	Sheppard SD-3	92	8	25	4708	56	84	23		131	Ad	70 1/4	6.00/16	12/38			NT	Op	8	1.85-	2	2.31-3.91
18	SD-4	91 1/2	8 3/4	26	6000	56	84	22 1/2	18 1/4	138 1/4	Ad	83 1/2	6.00/16	13/38			NT	Op	10	1.89-16.00	2	1.62-2.15
19	Tiger PTD 5	46	8	13	518	26	40	N	13	64	26	35	4.00/8	5.00/12	5.10	4.50		St	1	8.00	1	8.00
20	883	46	9	15	590	26	40	N	15	66	26	37	4.00/8	6.00/16	5.10	6.80		St	1	8.00	1	5.00
21	C-100	45	6	19	900	28	41	8	15	75	57	45	3.50/12	8/18	8.90	10.00			3	2.00-10.00	1	3.00

*—Capacity of final drive, each case.
†—Minimum.
■—Rated using gasoline.
▲—Engine clutch only; transmission clutch, multiple disc operating wet.
•—To top of steering wheel.
(a)—Included in transmission.
(b)—Front and center, 2 3/4; rear, 3.
A—Air.

Ad—Adjustable.
AL—Electric Auto-lite Co.
A-R—Auburn or Rockford.
Au—Auburn Clutch Co.
BB—Borg & Beck Div.
Bos—American Bosch Corp.
Br—Briggs & Stratton Corp.
B-S—Bosch or Scintilla.
CH—Chain.
CL—Cam and lever.
Cla—Clark Equipment Co.

Cont—Continental Motors Corp.
Cum—Cummins Engine Co.
D—Distillate
DA—Divided axle.
DF—Divided axle or front axle knuckle.
DFS—Divided axle, front axle knuckle or solid axle.
Don—Donaldson Co.
DP—Double plate, dry.
DR—Delco-Remy Div.
DSP—Dual single plate, dry.

D-U—Donaldson or United.
EG—Electric or gasoline starting.
Ele—Electric.
Ens—Ensign.
FK—Front axle knuckle.
FM—Fairbanks Morse & Co.
FO—Fork type.
G—Gasoline.
GM—General Motors Corp.
GS—Gasoline starting engine.
HC—Hand crank.

For Directory of Tractor Manufacturers listed above, see Table of Contents

U. S. Passenger Car Engine Trends

Weighted Average of Car Weights and Engine Hp.

Based on Number of Units Sold

	No. of Units Sold*	Gross Shipping Wgt. of Cars Sold (lb.)†	Gross Max. Hp. of Cars Sold‡	Average Weight (lb.)	Average Hp.
1930	2,625,979	7,320,000,000	142,800,000	2,780	54
1931	1,908,141	5,380,000,000	109,200,000	2,820	57
1932	1,096,399	3,200,000,000	75,400,000	2,920	69
1933	1,493,794	4,220,000,000	106,000,000	2,820	71
1934	1,888,557	5,560,000,000	156,000,000	2,940	83
1935	2,743,908	8,120,000,000	234,000,000	2,960	85
1936	3,404,497	10,190,000,000	291,000,000	3,000	86
1937	3,483,752	10,470,000,000	303,900,000	3,005	87
1938	1,891,021	5,743,000,000	169,200,000	3,035	89
1939	2,653,377	7,950,000,000	239,200,000	2,996	90
1940	3,415,905	10,511,000,000	312,100,000	3,077	91
1941	3,731,166	11,793,000,000	356,800,000	3,161	96
1946	1,815,196	599,600,000	181,200,000	3,303	100
1947	3,167,231	10,528,700,000	317,400,000	3,324	100
1948	3,490,952	11,552,200,000	352,600,000	3,309	100
1949	4,838,342	15,901,000,000	500,100,000	3,286	104
1950	6,326,438	20,624,200,000	660,400,000	3,260	104
1951	5,060,903	16,491,566,000	541,970,081	3,259	107
1952	4,158,394	13,626,614,000	467,497,469	3,348	112
1953	5,738,989	19,208,005,555	690,604,332	3,436	131
1954	5,535,464	18,708,481,077	749,762,007	3,380	135
1955	7,169,908	24,408,698,004	1,202,887,133	3,404	168
1956	5,955,248	20,383,147,845	1,105,273,284	3,423	186
1957	5,982,342	21,139,498,954	1,226,478,489	3,534	205
1958	4,650,948	16,677,078,430	996,308,191	3,586	233

† Shipping weight of 5 passenger, 4 door sedan taken as typical and used in conjunction with new registrations of each model.
‡ Maximum horsepower taken from previous Statistical Issues and used in conjunction with new registrations of each model.
* R. L. Polk & Co. registrations of new passenger cars.

. . . WHEEL TYPE—*concluded*

ENGINE							FUEL										BELT PULLEY				CAPACITIES						
Make and Model	Number of Cylinders—Bore and Stroke (In.)	Piston Disp. (Cu. In.)	R.P.M. at Governed Speed	Valve Arrangement	Number of Main Bearings	Diameter of Main Bearings	Standard	Optional	Ignition Make	Carburetor or Injector Pump Make	Air Cleaner Make	Governor Make	Oiling System Type	Cooling System Type	Clutch—Make and Type	Final Drive—Type	Diameter (In.)	Face (In.)	Normal R.P.M.	Steering Type	Cooling System (Gal.)	Fuel Tank (Gal.)	Crankcase (Qts.)	Transmission (Qts.)	Final Drive Case (Qts.)	Starting Method	Line Number
Own 88HC	6-3¾x4	265	1600	I	4	2⅝	G	....	DR	M-Z	Don	Own	PS	Pu	BB ..... SP	SG	11⅞	7¼	992	FK	4½	20½	6	18	(a)	Ele	1
Own 88D	6-3¾x4	265	1600	I	4	2⅝	O	....	N	Bos	Don	Bos	PS	Pu	BB ..... SP	SG	11⅞	7¼	992	SA	4½	18¼	6	18	(a)	Ele	2
Own 88D	6-3¾x4	265	1600	I	4	2⅝	O	....	N	Bos	Don	Bos	PS	Pu	BB ..... SP	SG	11⅞	7¼	992	FK	4½	18¼	6	18	(a)	Ele	3
Cont F140	4-3 3/16x4⅜	140	1800	L	3	2 17/64	G	....	DR	Mar	Don	Pie	P	Pu	Au ..... SP	SG	8½	6½	1160	CL	2½	10	4	8	1½	Ele	4
Own 550HC	4-3⅝x3¾	155	2000	I	3	2¼	G	....	DR	Mar	Don	Pie	PS	Pu	Au ..... SP	SG	9	6½	1319	FK	3½	13	4	20	(a)	Ele	5
Own 550DSL	4-3⅝x3¾	155	2000	I	3	2¼	O	....	N	Bos	Don	Bos	PS	Pu	Au ..... SP	SG	9	6½	1319	FK	3½	13	4	20	(a)	Ele	6
Own 770HC	6-3½x3¾	216	1750	I	4	2¼	O	....	DR	Mar	Don	Pie	PS	Pu	BB ..... SP	SG	11⅝	6½	1022	SA	4½	20	5	18	(a)	Ele	7
Own 770DSL	6-3½x3¾	216	1750	I	4	2¼	O	....	N	Bos	Don	Bos	PS	Pu	BB ..... SP	SG	11⅝	6½	1022	SA	4½	20	5	18	(a)	Ele	8
Own 770HC	6-3¾x4	265	1750	I	4	2⅝	G	....	DR	Mar	Don	Pie	PS	Pu	BB ..... SP	SG	11⅝	6½	1022	SA	4½	20	6	18	(a)	Ele	9
Own 770DSL	6-3¾x4	265	1750	I	4	2⅝	O	....	N	Bos	Don	Bos	PS	Pu	BB ..... SP	SG	11⅝	6½	1022	SA	4½	20	6	18	(a)	Ele	10
Own 660HC	4-3⅝x3¾	155	2000	I	3	2⅝	G	....	DR	Mar	Don	Pie	PS	Pu	BB ..... SP	SG	9½	7¼	1232	SA	3½	13	4	18	(a)	Ele	11
Own 660D	4-3⅝x3¾	155	2000	I	3	2⅝	O	....	N	Bos	Don	Bos	PS	Pu	BB ..... SP	SG	9½	7¼	1232	SA	3½	13	4	18	(a)	Ele	12
Own 950HC	6-4x4	302	1800	I	4	2⅝	G	....	DR	Mar	Don	Own	PS	Pu	BB ..... SP	SG	12¼	9	1021	FK	5½	30	6	32	(a)		13
Own 950DSL	6-4x4	302	1800	I	4	2⅝	O	....	N	Bos	Don	Bos	PS	Pu	BB ..... SP	SG	12¼	9	1021	FK	5½	30	6	32	(a)		14
GM 3-71	3-4½x5	213	1800	I	4	3½	O	....	N	GM	Don	GM	PS	Pu	BB ..... SP	SG	12¼	9	1021	FK	5½	30	11	32	(a)	Ele	15
GM 3-71	3-4½x5	213	2000	I	4	3½	O	....	N	GM	Don	GM	PS	Pu	BB ..... SP	SG	12¼	9	1134	FK	5½	30	11	32	(a)	Ele	16
Own 6E	3-4¼x5	212	1650	I	4	2¾	O	....	Own	Own	Don	Own	P	Pu	Roc ..... SP	SG	8¼	7½	1350	....	7½	15	13	25	(a)	Ele	17
Own 16B	4-4½x5	319	1650	I	5	3 3/16	O	....	Own	Own	Don	Own	P	Pu	Roc ..... SP	SG	10	7 1/16	1150	....	7½	22	10	32	(a)	Ele	18
Br 14	1-2¾x2¾	14	3200	L	....	....	G	....	Br	Br	Uni	Br	PS	A	TD ..... MD	SC	......	......	......	SA	N	1	½	1	1	HC	19
Br 23	1-3x3	19	3300	L	....	....	G	....	Br	Br	Uni	Br	PS	A	TD ..... MD	SC	......	......	......	SA	N	1½	½	1	1	HC	20
Br 23	1-3x3	19	3300	L	....	....	G	....	Br	Br	Uni	Br	PS	A	....	SG	7	4	1300	......	N	2	3	3	3	HC	21

H-E—Hand crank or electric.
Her—Hercules Motors Corp.
I—In head.
IG—Internal gear.
Int—International Harvester Co.
I-R—International or Rockford.
K—Kerosene.
L—"L" head (valves at side).
Lo—Long Mfg. Co.
LP—Liquified petroleum gas.
Luc—Lucas C.A.V.
Mar—Marvel-Schebler Carburetor Div.
MD—Multiple disc, operating dry.
M-Z—Marvel-Schebler or Zenith.
N—None.
Nov—Novi Equipment Co.
N-P—Novi or Pierce.
NT—Not tested.
O—Diesel fuel.
Op—Optional.
O-R—Own or Rockford.
P—Pressure.
Per—F. Perkins, Ltd.
Pie—Pierce Governor Co.
PL—Planetary.
PS—Pressure and splash. **Pu**—Pump.
Roc—Rockford Clutch Div.
Ros—Roosa-Master.
SA—Solid axle.
SB—Spiral bevel gear.
SC—Spur gear and chain.
SG—Spur gear.
SH—Spur gear and helical gear.
SO—Single plate, operating in oil.
SP—Single plate, dry.
St—Standard.
Std—Standard Motors, Ltd.
TC—Torque converter.
TD—Twin Disc Clutch Co.
TF—Tractor fuel.
TS—Thermo-syphon.
Uni—United Specialties Co.
WS—Worm and sector.
Zen—Zenith Carburetor Div.

For Directory of Tractor Manufacturers listed above, see Table of Contents

Military Cargo Vehicle Specifications

MODEL	Manufacturer	PAY-LOAD (Tons)		WEIGHT (Lbs.)		OVERALL DIMENSIONS (In.)			Axle Ground Clearance (In.)	ENGINE									TRANSMISSION							SERVICE BRAKES		
		Cross Country	Highway	Empty	Fully Equipped	Width	Length	Height		Make	No. of Cylinders, Bore and Stroke	Displacement (Cu. In.)	Fuel Used	Cooling Medium	Max. Brake Hp. at R.P.M.	Maximum Speed (Mph)	Max. Fording Depth (In.)	Cruising Range—Miles	Make	Type	No. of Forward Speeds	No. of Reverse Speeds	Transfer Case	Differential—Type	Suspension—Type	Actuated by	Type	Wheelbase (In.)
M38A1	WM	⅜	⅝	2,665	3,465	62	138⅝	73¾	9¼	WM	4-3⅛x4⅜	134.2	G	Liq	72-4000	60	72	200	WM	Co	3	1	2s	Co	SE	......	Hd	81
M37	Do	¾	1	5,950*	7,800*	73½	189⅝*	89¾	10¾	Do	6-3¼x4⅝	230.2	G	Liq	94-3200	55	72	225	Do	Co	4	1	2s	Co	SE	......	Hd	112
M35	Reo	2½	5	12,880*	18,230*	96	274¾*	111 3/16	10⅝	Reo	6-4⅛x4⅛	331.0	G	Liq	146-3400	62	72	280	Spi	Co	5	1	2s	Co	Bcp	Air	Hd	154
M211	GM	2½	5	13,580*	18,930*	96	269¼*	112⅛	12	GM	6-4x4	301.6	G	Liq	145-3400	58	72	300	GM	Hy	8	2	†	Co	Bcp	Air	Hd	156
M54	IH	5	10	19,945*	30,295*	97	314¼*	116	11½	CM	6-4⅞x5⅜	602.0	G	Liq	224-2800	53	72	214	Spi	Co	5	1	2s	Co	Bcp	Air	Hd	179
M8A1■	AC	7½	....	44,500*	63,000*	123½	265⅛*	120	18 11/16	CM	6-5¾x5¾	859.9	G	Air	500-2800	41	60	180	GM	Cr	2	1	......	......	Inb	Md	Me	157⅛‡
M76■	GM	1½	....	9,000	12,000	98	189	96¾	16¾	CM	4-4⅝x4	268.8	G	Air	127-3200	28	Am	160	GM	Cr	2	1	......	......	Inb	Md	Me	95⅝‡
M125	MT	10	15	32,000*	62,000	114	328	129	12½	LR	8-5¼x4⅞	844.0	G	Liq	297-2600	40	78	300	MT	Co	5	1	2s	Co	Bcp	Air	Hd	181½
M274	WM	½	½	1,000	1,000	50	125	46	11½	WM	4-2¾x2¼	53.0	G	Air	17-3200	26	12	....	WM	Co	3	1	2s	N	N	Ma	Me	57
M422	AM	⅜	½	1,700	2,550	61	107	51	9¾	AM	4-3¼x3¼	107.0	G	Air	52-3600	62	60	225	NP	Co	4	1	1s	L	IE	Ma	Hd	65

ABBREVIATIONS

*—With winch.
■—Tracked vehicles.
†—2 speed reduction unit on transmission.
‡—Track contact length.
1s—Single speed.
2s—Two speed.
AC—Allis-Chalmers Mfg. Co.
Am—Amphibious.
AM—American Motors Corp.
Bcp—Bogie constant parallel arm (leaf springs).
Co—Conventional.
CM—Continental Motors Corp.
Cr—Cross drive.
Do—Dodge Division.
G—Gasoline.
GM—General Motors Corp.
Hd—Hydraulic.
Hy—Hydramatic.
IE—Independent elliptic.
IH—International Harvester Co.
Inb—Individual torsion bar.
L—Locking.
Liq—Liquid.
LR—Le Roi.
Ma—Manual.
Md—Multiple disc.
Me—Mechanical.
MT—Mack Trucks, Inc.
N—None.
NP—New Process Gear.
SE—Semi-elliptic.
Spi—Spicer Mfg. Div.
WM—Willys Motors.

In every one of Detroit's FABULOUS 59's dependable National Oil Seals

Year after year, Detroit achieves the impossible—improving constantly on the best cars in the world.

Year after year, we ride more smoothly, comfortably and quietly in high-performance automobiles of outstanding beauty.

And year after year, Detroit has increased the brute ruggedness and unfailing dependability which have made American cars the world's envy.

Since the dawn of the Automotive Age, National has supplied vital oil seals for the wheels, power trains, engines and accessories of cars, trucks, buses and off-highway vehicles. National is proud of this record, proud to be a part of our nation's greatest industry, proud of the faith Detroit places in the products we make.

Our pledge: still better research and manufacturing to make sure National continues to mean "tomorrow's oil seals—today!"

NATIONAL SEAL

Division, Federal-Mogul-Bower Bearings, Inc.
General Offices: Redwood City, California
Plants: Redwood City and Downey, California, Van Wert, Ohio

Southern-Plaza equips 74 new Kenworths with Spicer 12-Speed Transmissions

"The Spicer Synchro-Master 12, with its .80 overdrive in 12th gear, is ideal for fuel-saving operation," states Edward R. Pecora, Vice President in charge of operations for Southern-Plaza Express, Inc., Dallas, Texas.

"Coupled to a Cummins NT4, through a Spicer 14" two-plate clutch, the Spicer Synchro-Master 12 gives us a road speed of 52 MPH at a governed engine speed of 2000 rpm. When cruising, we maintain the same road speed at only 1600 rpm simply by shifting into 12th gear to benefit from the .80 overdrive.

"We think we've achieved the ultimate in fuel-saving and engine-saving economy without sacrificing trip time. That's why we specified the Spicer transmission, with a weight-saving aluminum case, for all 74 of our new Kenworth tractors."

Edward R. Pecora
Vice President - Operations

WRITE FOR FREE BOOKLET giving a complete description of the close-stepped, fully-synchronized Synchro-Master 12 Transmission. For added information, call the Dana Engineer.

DANA Spicer

DANA CORPORATION • Toledo 1, Ohio

DANA PRODUCTS Serve Many Fields:

AUTOMOTIVE: Transmissions, Universal Joints, Propeller Shafts, Axles, Powr-Lok Differentials, Torque Converters, Gear Boxes, Power Take-Offs, Power Take-Off Joints, Clutches, Frames, Forgings, Stampings.

INDUSTRIAL VEHICLES AND EQUIPMENT: Transmissions, Universal Joints, Propeller Shafts, Axles, Gear Boxes, Clutches, Forgings, Stampings.

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RAILROAD: Transmissions, Universal Joints, Propeller Shafts, Generator Drives, Rail Car Drives, Pressed Steel Parts, Traction Motor Drives, Forgings, Stampings.

AGRICULTURE: Universal Joints, Propeller Shafts, Axles, Power Take-Offs, Power Take-Off Joints, Clutches, Forgings, Stampings.

MARINE: Universal Joints, Propeller Shafts, Gear Boxes, Forgings, Stampings.

Many of these products manufactured in Canada by Hayes Steel Products Limited, Merritton, Ontario.

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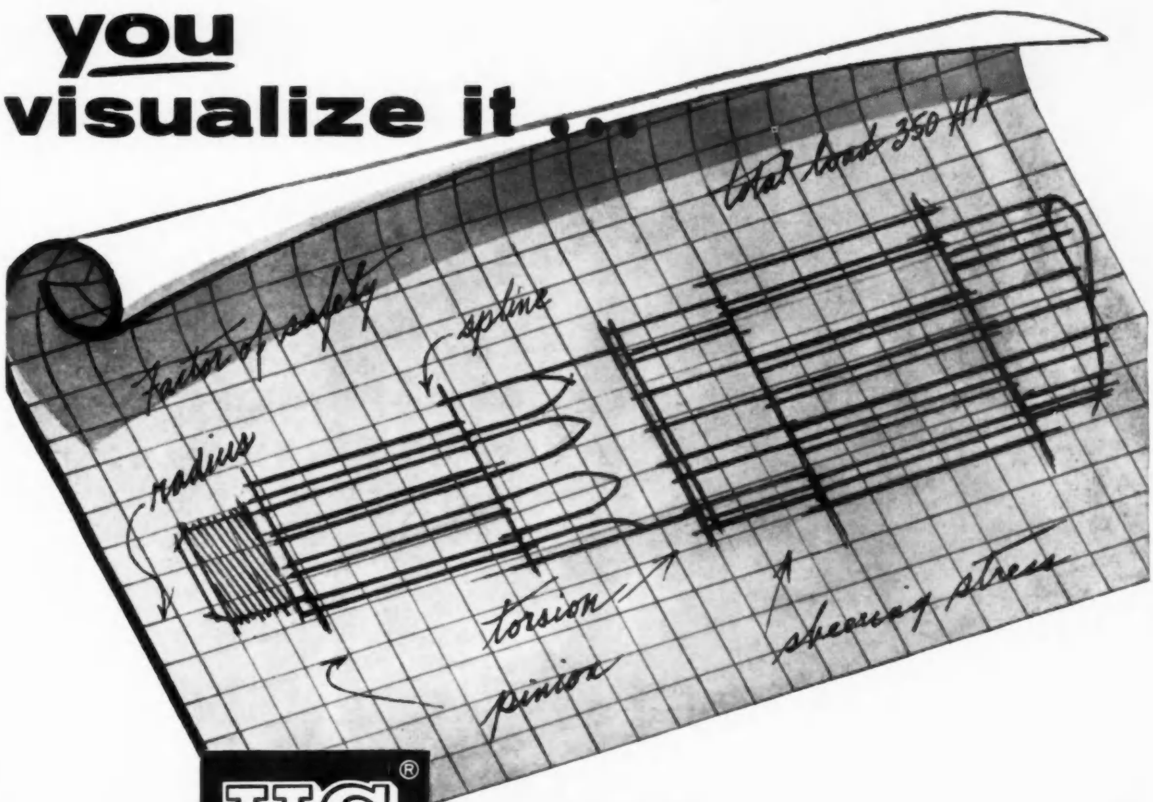
you visualize it . . .



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for extra resistance to strain, stress and wear . . . whether you're visualizing a new machine design or simply building "more of the same."

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Convince yourself!

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THE U. S. AXLE COMPANY
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Please send me the brochure on U. S. Custom-Engineered Axle Shafts.

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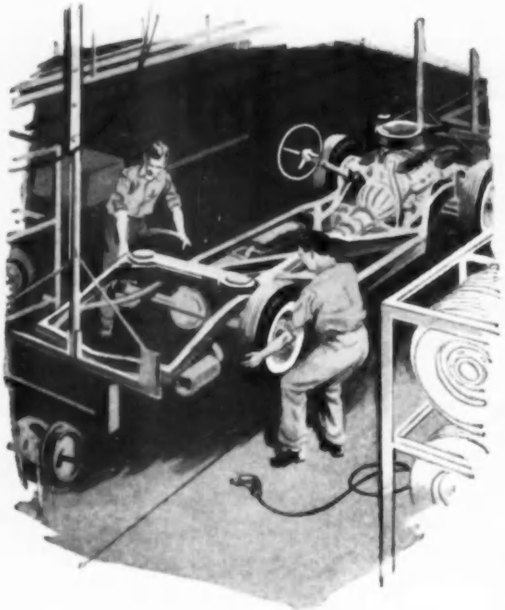
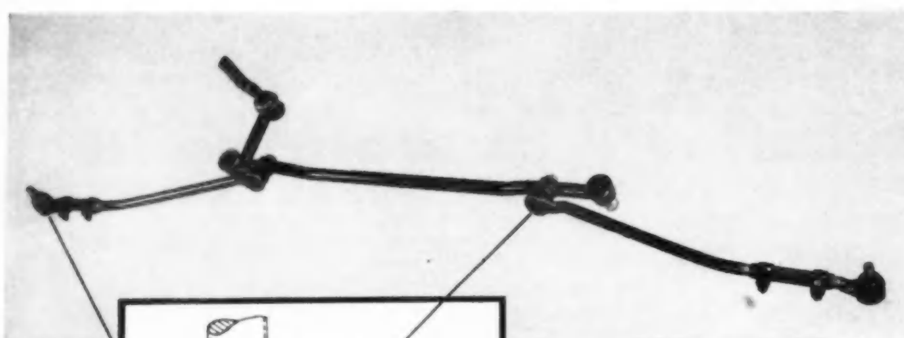
SINCE 1920 • POTTSTOWN, PENNSYLVANIA



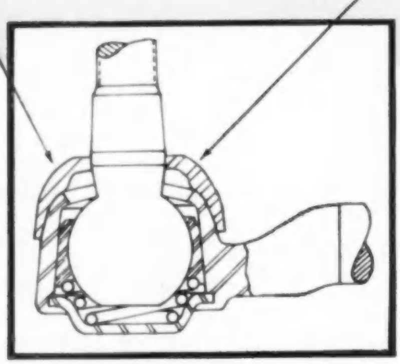
New product from Thompson

GREASED-FOR-LIFE STEERING LINKAGE . . .

New developments in chassis and front end parts have been coming from Thompson's Michigan Division for many, many years. Almost every make of passenger car, truck, farm tractor or off-the-road vehicle performs better because of Thompson contributions. Shown here is another Thompson development ready now for manufacturers to use in models to come.



Completely assembled, GREASED-FOR-LIFE steering linkage for future passenger car application.



For help in developing and manufacturing front end and chassis parts for your models of the future, call on Thompson's Michigan Division. We have the skills and facilities to help you build a better vehicle usually at a lower cost.

1—Provides constant take-up for wear.
2—Permanently lubricated.
3—Has excellent insulation qualities to reduce road noise transmission from running gear.
4—Exceptionally long life.

THOMPSON PRODUCTS
MICHIGAN DIVISION
Thompson Ramo Wooldridge Inc.

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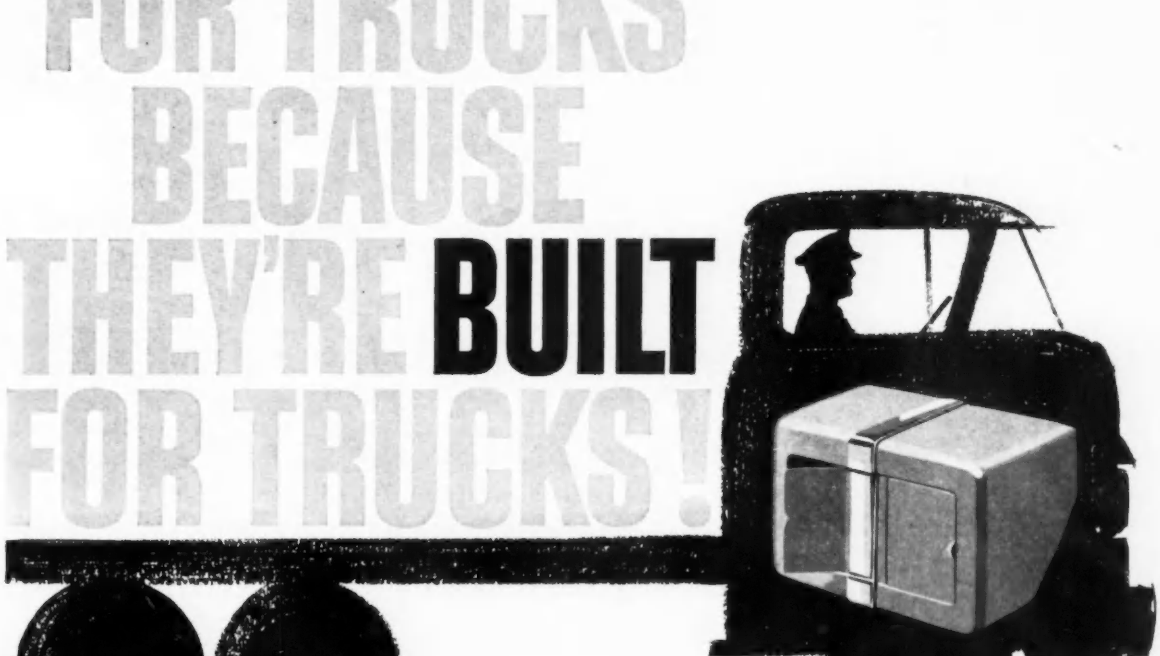
EVANS HEATERS ARE **RIGHT** FOR TRUCKS BECAUSE THEY'RE **BUILT** FOR TRUCKS!



There's as big a difference between truck and car heaters as there is between truck and car tires. The rugged construction of Evans truck-built heaters . . . the combination of the right BTU rating and *proper heat distribution* . . . just can't be matched by heaters built for cars. Whatever your truck heating requirements, our engineers are ready to work with yours to design an Evans heater to do the job. Write Evans Products Company, Dept. P-3, Plymouth, Mich.

Regional Representatives: Cleveland, Frank A. Chase; Chicago, R. A. Lennox; Detroit, Chas. F. Murray Sales Co.; Allentown, Pa., P. R. Weidner

EVANS

TRUCK AND BUS HEATERS AND VENTILATING SYSTEMS

•

EVANS PRODUCTS COMPANY

Plymouth, Michigan

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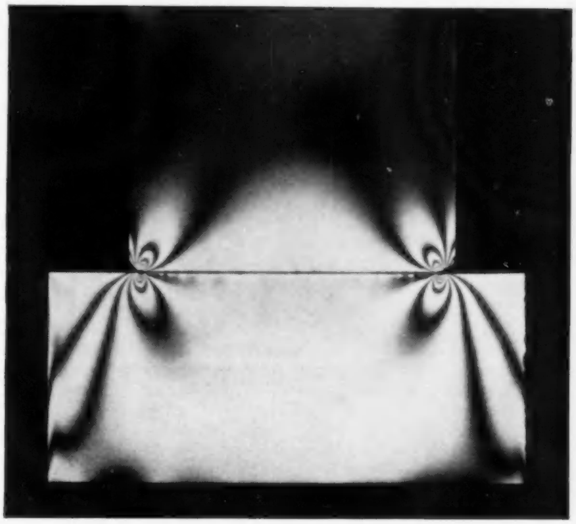
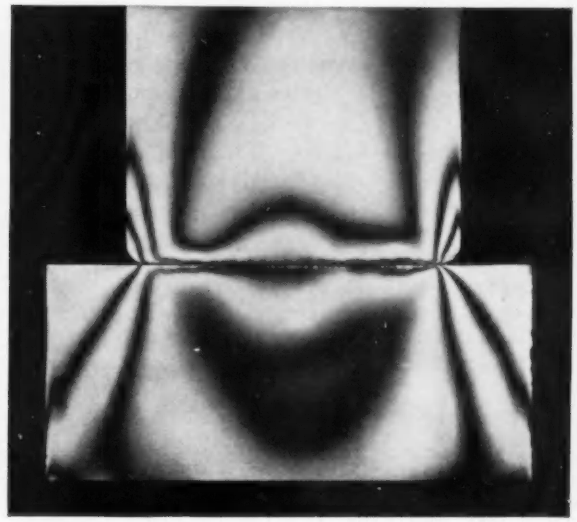
One in a series of technical reports by Bower

BEARING BRIEFINGS

ROLLER BEARING LIFE AND CAPACITY LINKED TO STRESS DISTRIBUTION





These reproductions of photoelastic studies contain important evidence for every engineer and designer concerned with the performance and selection of roller bearings. In these photographs, the alternate dark and light areas, called fringes, indicate not only the magnitude of stress but also the stress distribution. The photographs were taken by Bower Research Engineers during a study of stress distribution in roller bearings.

The subjects represent rollers and raceways of two roller bearings under identical loads. The illustration at the left shows a roller of conventional design. The illustration at the right shows a Bower "Profiled" roller. That is, the roller is precision ground with a large radius generated along the body of the roller—a predetermined and controlled distance from each end.

The conventional roller photo (left) clearly shows how, under load, stress concentration builds up in and near the roller ends. This is called edge-loading. Such areas of concentrated stress are the breeding grounds for metal fatigue and eventual bearing failure.

In the photo of the "Profiled" roller (right) stress lines can be seen uniformly distributed across the whole length of the roller and raceway. There are no points of excessive stress concentration, consequently no starting points for early fatigue. Such a "Profiled" roller exhibits a great advantage in improved load carrying capacity, a most important bearing requirement.

Under actual operating conditions, Bower "Profiled" roller bearings show a considerably longer life at higher speeds and under greater loads than conventional roller bearings.

Because of this, and of other Bower features to be discussed in later technical reports, we suggest that you consider the advantages of Bower bearings in satisfying your future bearing requirements.

* * * *

Bower engineers are always available, should you desire assistance or advice on bearing problems. Where product design calls for tapered roller bearings or journal roller assemblies, Bower makes these also in a full range of types and sizes.

BOWER ROLLER BEARINGS

BOWER ROLLER BEARING DIVISION — FEDERAL-MOGUL-BOWER BEARINGS, INC., DETROIT 14, MICHIGAN

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KING-SEELEY
INSTRUMENTATION
The Quality Standard
For 1959
KING-SEELEY CORPORATION
ANN ARBOR, MICHIGAN
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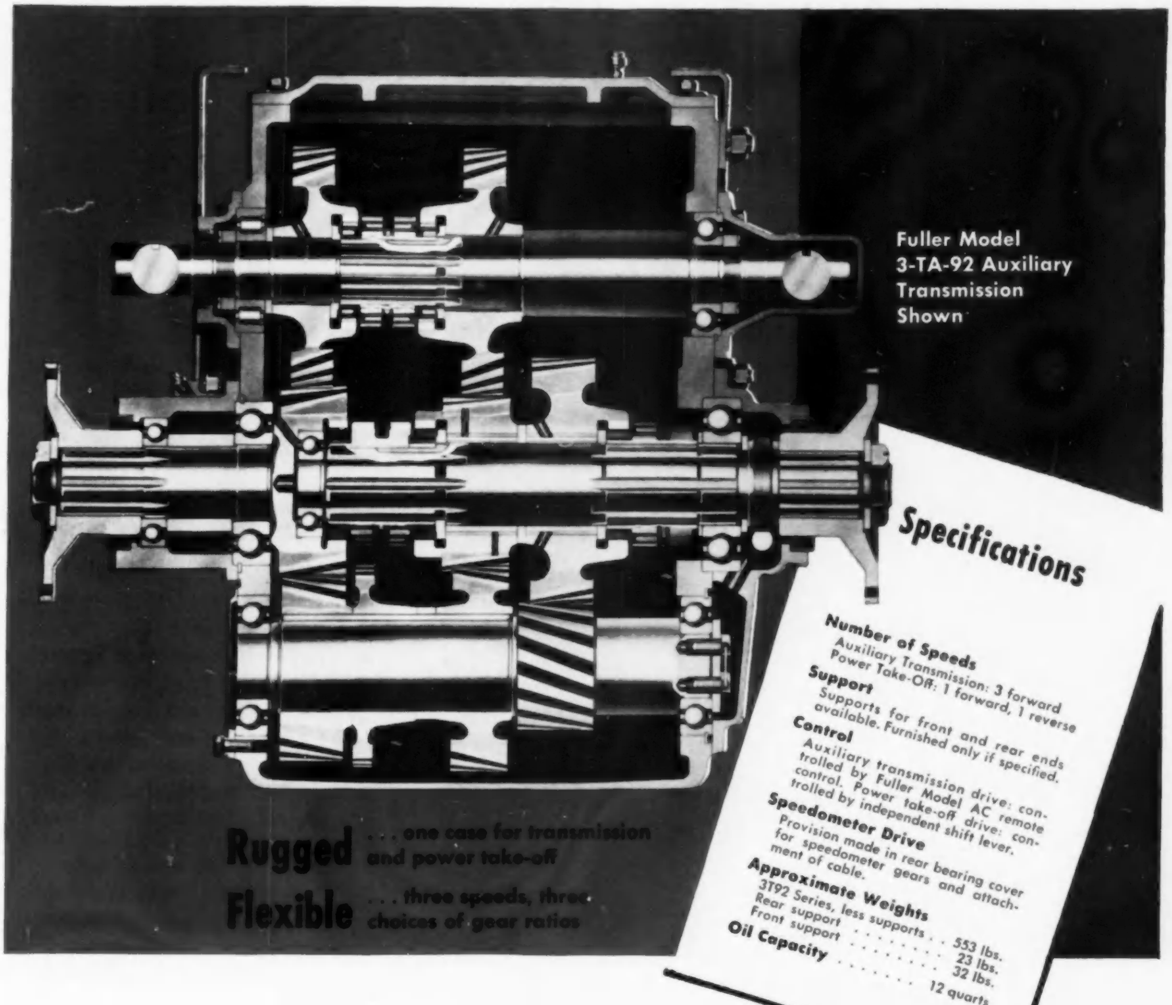

NOW! 3 Auxiliary Transmissions with Built-In Power Take-Off

Splitting ratios . . . conventional steps . . . deep reductions . . . optional gearing needed for your operation plus the bonus of Fuller's built-in *Full Torque* power take-off.

Designed for exceptionally rugged service in all operations requiring a dependable Full Torque power take-off, the Fuller 3T92 Series Auxiliary Transmissions offer a choice of three different sets of gear ratios.

Full engine torque can be applied through the Fuller 3T92 Series power take-off, because the gears and shafts of the PTO are installed in—not on—the transmission case. The PTO provides both forward and reverse speeds, the ratios varying with the number of forward speeds available from the main transmission, and with the direction of shaft rotation.

Ratios now available in the Fuller 3T92 Series Auxiliary Transmissions:

Model Number:	3TA92	3TC92	3TD92
HIGH	.75	.75	.75
INTERMEDIATE	1.00	1.00	1.00
LOW	2.09	2.64	1.24

FULLER — TRANSMISSION DIVISION —
MANUFACTURING COMPANY
KALAMAZOO, MICHIGAN
Subsidiary EATON Manufacturing Company

Unit Drop Forge Div., Milwaukee 1, Wis. • Shuler Axle Co., Louisville, Ky. (Subsidiary) • Sales & Service, All Products, West. Dist. Branch, Oakland 6, Cal. and Southwest Dist. Office, Tulsa 3, Okla.
Automotive Products Company, Ltd., Brock House, Langham Street, London W.1, England, European Representative

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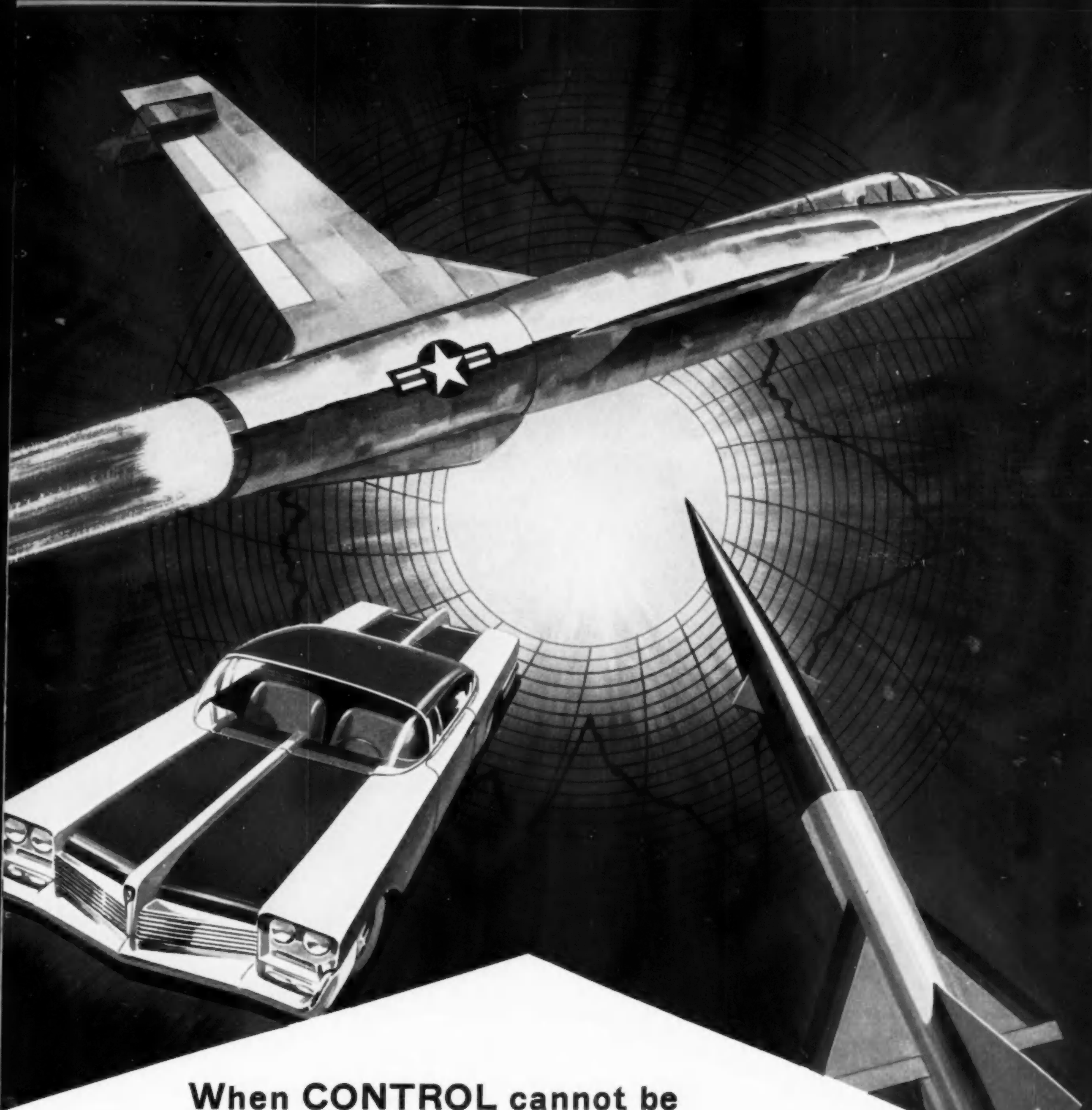


AIR BRAKE PARTS......

Which method

The parts buyer with the furrowed brow has reason to be worried. Better than anyone he knows that an automotive air brake system is no stronger than its weakest link, that failure of a single device can cause unnecessary downtime expense and may even risk lives and valuable property. A trivial saving, he well knows, can become a costly extravagance!

By way of contrast, the buyer at right reflects "systems serenity". He is systems conscious, and when he buys air brakes he buys genuine Bendix-Westinghouse Air Brake systems. He knows that Bendix-Westinghouse Air Brake equipment is "system engineered"—that each unit is designed to perform a specific operation in a closely related

Built-In Features of Leaf Springs

(★) Load Balance and Control . . . with the added safety factor provided by integral eye-mountings and multiple alloy-steel leaf components which minimize the possibility of *complete* suspension failure in service.

(★) Sidesway Control . . . with the "three-point" suspension distributing strain over a longer segment of frame assembly at both front and rear. This permits a *definite saving* in structural weight of frame.

(★) Self-Alignment of springs, frame, and axles achieved by utilizing the design characteristics of leaf springs.

And the PLUS FACTOR of *utmost economy* for both manufacturer and customer.

DSP *Leaf* SPRINGS

DETROIT STEEL PRODUCTS DIVISION

OF *Fenestra* INCORPORATED

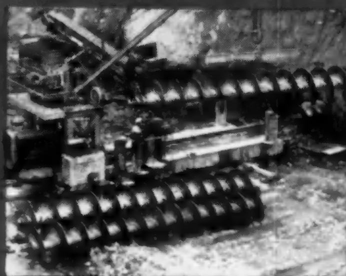
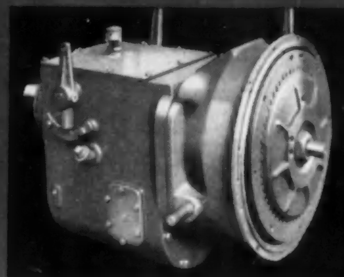
6000 Caniff Avenue, Detroit 12, Michigan

SINCE 1904 — ORIGINAL EQUIPMENT ON CARS, TRUCKS, CABS, BUSES, TRAILERS

An Assurance of Dependable Service

COTTA HEAVY-DUTY TRANSMISSIONS

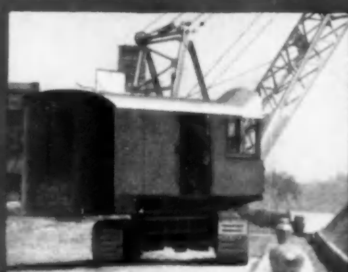
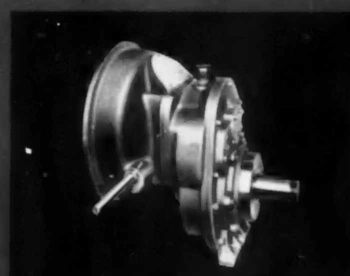
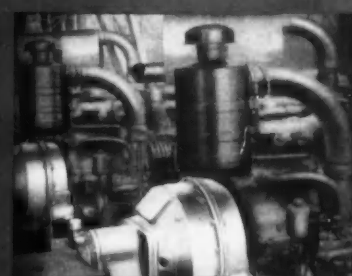
For jobs that ordinary gear-boxes can't handle — heavy-duty loads, continuous day-and-night operation, requiring multi-speeds forward and reverse — come to COTTA for "Engineered-To-Order" Transmissions, custom-designed to fit available space.


An Assurance of Dependable Service

COTTA HEAVY-DUTY REDUCTION UNITS

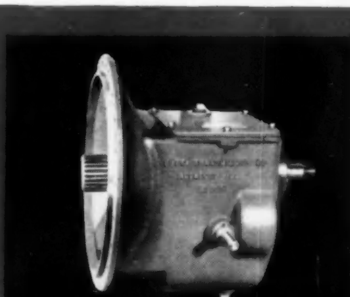
Take this low-cost way to adapt higher speeds of new engines to lower rpm required for machine operation. Cotta Reduction Units are available in a broad range of ratios . . . input torque of 150 to 2000 foot pounds — for use on cranes, shovels, pumps, etc.

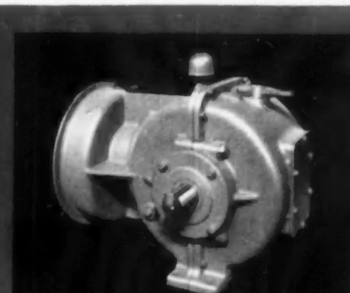




An Assurance of Dependable Service

COTTA TRANSMISSIONS FOR TORQUE CONVERTERS

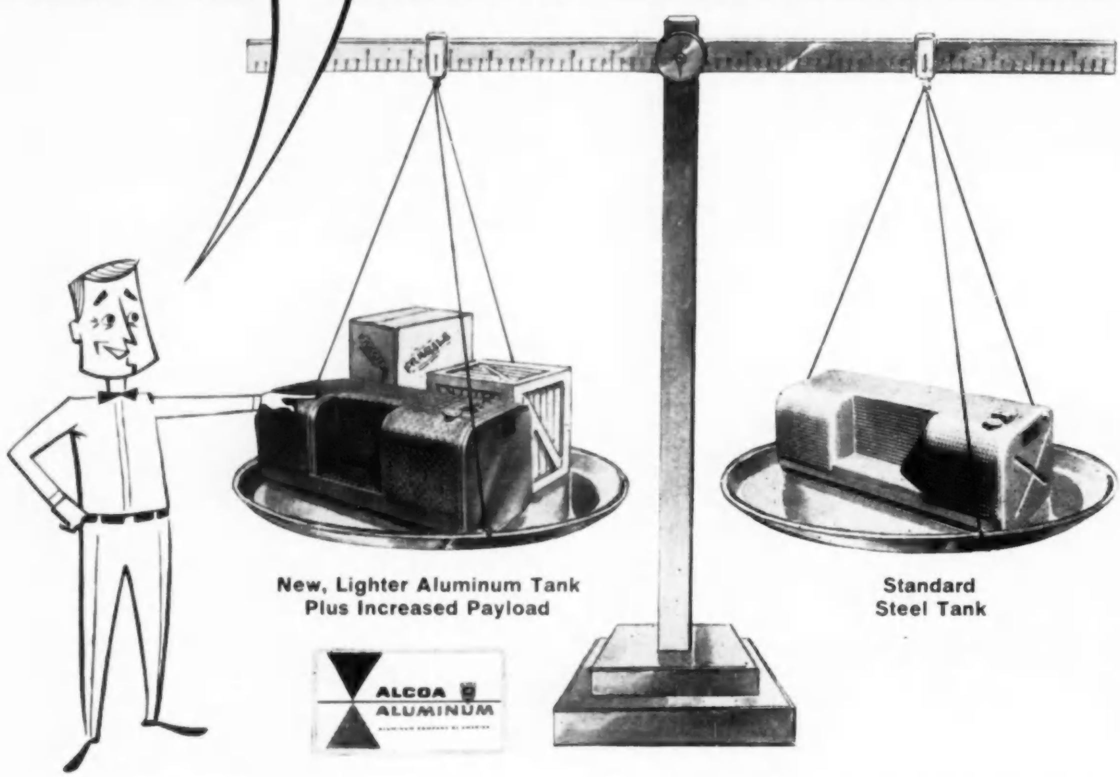
Get easier control of power through a wide range of torque and speed conditions on mobile equipment with "Engineered-To-Order" Cotta Transmissions. These specially designed, compact transmissions provide increased efficiency on trucks, railcars, winches, drilling rigs, hoists, and other heavy-duty units.





LET US HELP YOU SOLVE YOUR PROBLEM . . . COTTA TRANSMISSION CO., ROCKFORD, ILL.

New *SNYDER* Aluminum Tanks Will Allow Increased Payloads!



Snyder Center-Step Tanks illustrated here each have a capacity of 70 gallons. The steel tank weighs 153 lbs., the aluminum, 72 lbs. With a dual aluminum tank installation your trucks can carry 162 lbs. more payload—every trip!

And when you buy Snyder you get a quality engineered, proven product . . . fully guaranteed!

Snyder has more experience than any other tank manufacturer in designing and building aluminum tanks. More and more truck manufacturers are accepting them for original equipment installation for these reasons.

All Snyder Aluminum Tanks are built of Alcoa Aluminum, are carefully tested, and meet all I.C.C. requirements for gasoline or diesel use.

Because they are corrosion-resistant, they never need to be painted. And because they *can't* spark, they're extra safe for use with highly volatile gasoline.

It has been established that less sludge forms when diesel fuel is carried in *aluminum* tanks. This means less frequent cleaning and reduced maintenance costs.

Snyder Aluminum Tanks are now in regular production. You can select from 12 models of aluminum Cylinder Tanks with capacities from 37 to 72 gallons or from 4 models of aluminum Center-Step Tanks with capacities from 44 to 70 gallons. For all their advantages, isn't it time you considered aluminum tanks? For complete information, write or phone Mr. Richard Kryder, Sales Manager.

For safety, satisfaction and service, be sure to:

ALWAYS SPECIFY

SNYDER

SNYDER TANK CORPORATION

P. O. Box 14, Buffalo 5, N. Y. • Phone TRiangle 7100

HEADQUARTERS

for tough valve gear problems

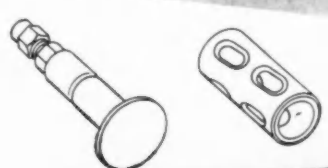
When you're facing difficult problems involving valve gear, the men to see are Chicago's tappet engineers. For, in 25 years of specialization on valve train parts, we have encountered and solved many problems similar to yours.

Applications, such as those illustrated, are typical examples . . . and the operational records established by Chicago tappets of all types in more than 25,000,000 engines are the best testimonial to their success in meeting the toughest industry requirements.

Even when your engine does not present unique requirements in valve gear design, checking with Chicago can often assure a performance bonus. Chicago's hydraulic tappets, for example, assure longer trouble-free life, reduced starting noise, and quieter operation.

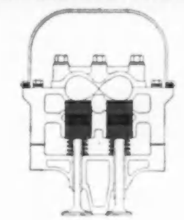
For Any Engine

Car, truck, tractor, diesel . . . aircraft, outboard, power mower, or industrial . . . whatever your type of engine, big or small . . . it will pay you to consult Chicago's development engineers *while you are still in the preliminary design stages.*

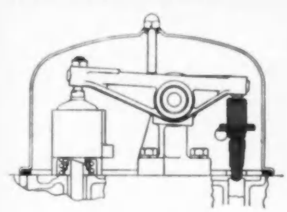


Write or wire our Tappet Division today

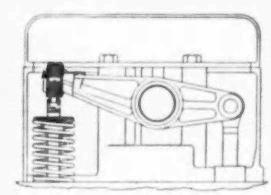
Hydraulic and Mechanical Tappets (Barrel or Mushroom Type) of Alloy Steel, Hardened Alloy Cast Iron, Chilled Iron, or Alloy Chilled Iron • Push Rods • Adjusting Screws



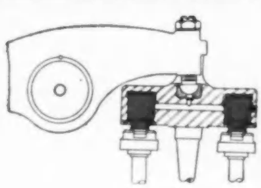
Hydraulic Inverted Cup Type Unit



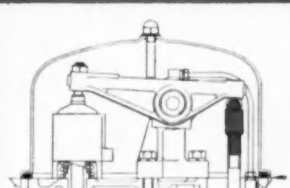
Push Rod Type with Compression Release Application



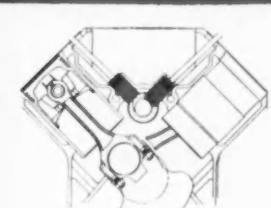
Threaded Type Rocker Arm Unit



Dual Valve T-Bridge Hydraulic Application



Hydraulic Unit on End of Push Rod



V-8 Automotive Hydraulic Tappet Application

THE CHICAGO SCREW COMPANY

ESTABLISHED 1872 • DIVISION OF STANDARD SCREW COMPANY

2701 WASHINGTON BOULEVARD, BELLWOOD, ILLINOIS

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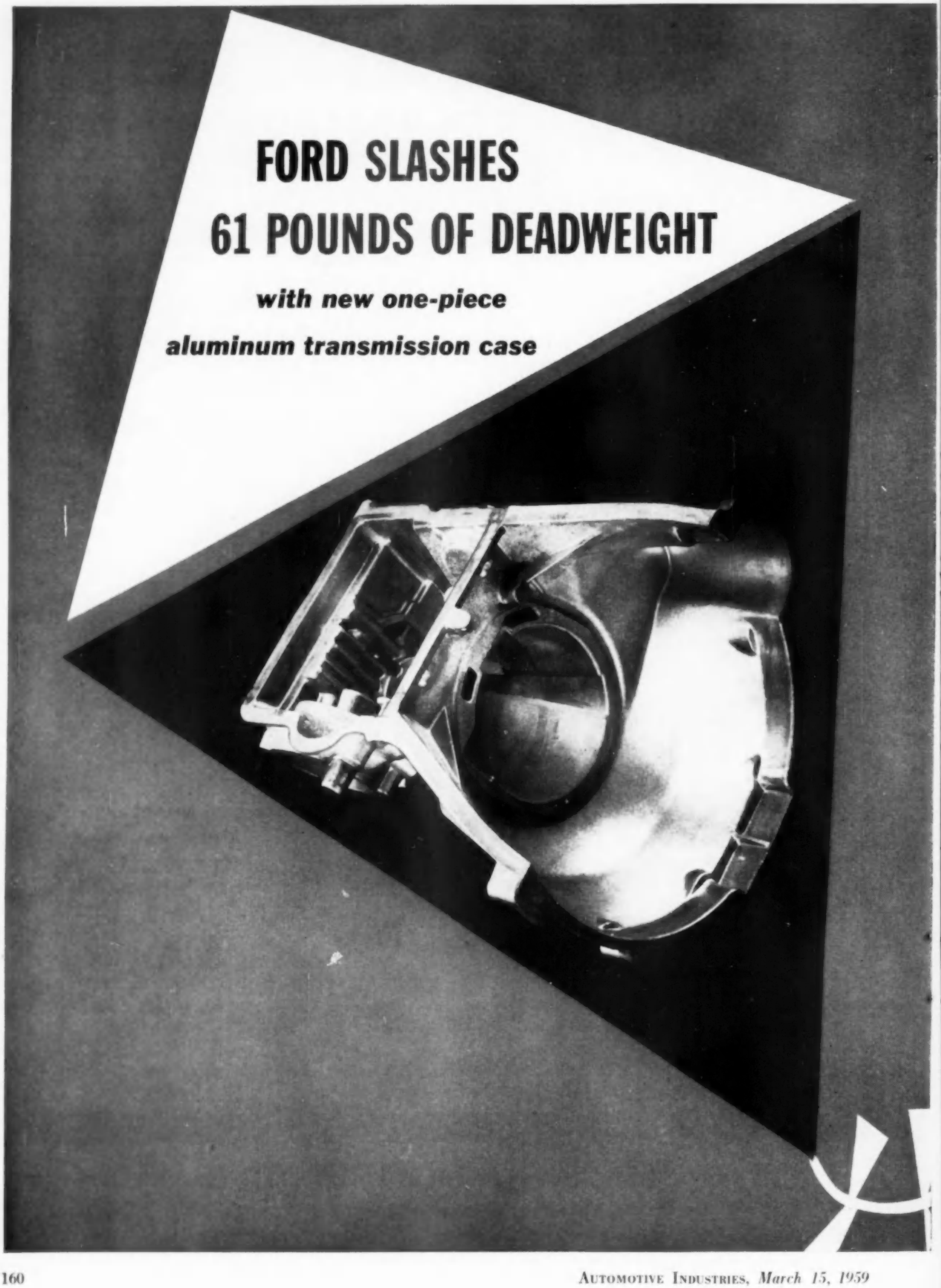
FORD SLASHES
61 POUNDS OF DEADWEIGHT
with new one-piece
aluminum transmission case

When the Ford Motor Company decided to shift to aluminum for their transmission converter housing and gearbox, they drew on the unsurpassed experience of Alcoa's Development Laboratory engineers. Starting at the design and testing stages, they received valuable design recommendations that enabled them to mass produce—at the lowest possible cost—a high-strength aluminum transmission casting that weighs just 24 pounds.

Lightweight, Permanent Mold Casting. At the outset, the permanent mold casting process was chosen to withstand the extreme stresses in this application and yet provide a very light casting. Because this process permits thinner walls, a weight saving greater than the normal 3-to-1 ratio of cast iron to aluminum was effected. A cast iron casting of the same design would weigh 85 pounds or 61 pounds more than the new aluminum casting.

Produced Faster at Less Cost. The one-piece casting replaces four parts. It eliminates the cost and time of fabricating and assembling separate iron flywheel housing, iron gearbox, and front and rear aluminum die-cast servo bodies.

In addition, Alcoa design suggestions permit the use of permanent mold alloy 333F, an alloy that provides even greater savings since it needs no heat treating.

Aluminum Die-Cast Extension, Stator, Valve Body. The total weight of these die-cast aluminum transmission parts is about 10 pounds. Because aluminum die castings can be made to accurate tolerances, machining costs are lower. Their practicality and economy have been proven in over seven years of actual use.

Let Alcoa Help You. Alcoa's laboratory facilities, manned by skilled and experienced engineers, can help you get the most out of aluminum at the lowest possible cost. Team up with Alcoa Development Division engineers at the initial design stage; they'll help you evaluate casting methods for particular applications and advise you on alloy control, dimensional stability and interpretation of test data. Write Aluminum Company of America, Development Division, 1786-C Alcoa Bldg., Pittsburgh 19, Pa.

ALCOA ALUMINUM gives every car more GLEAM AND GO

ALCOA ALUMINUM
ALUMINUM COMPANY OF AMERICA

Your Guide to the Best in Aluminum Value

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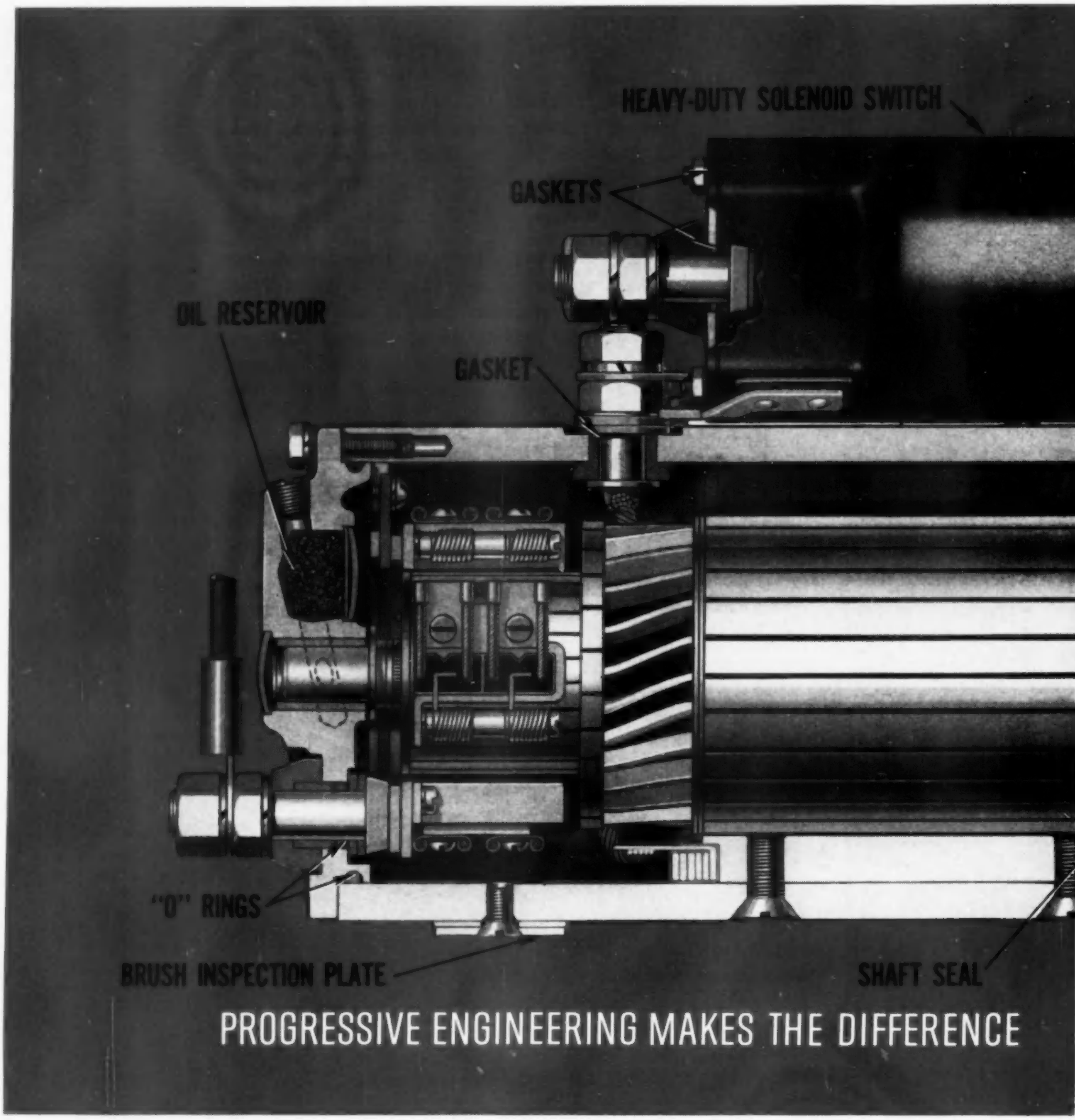
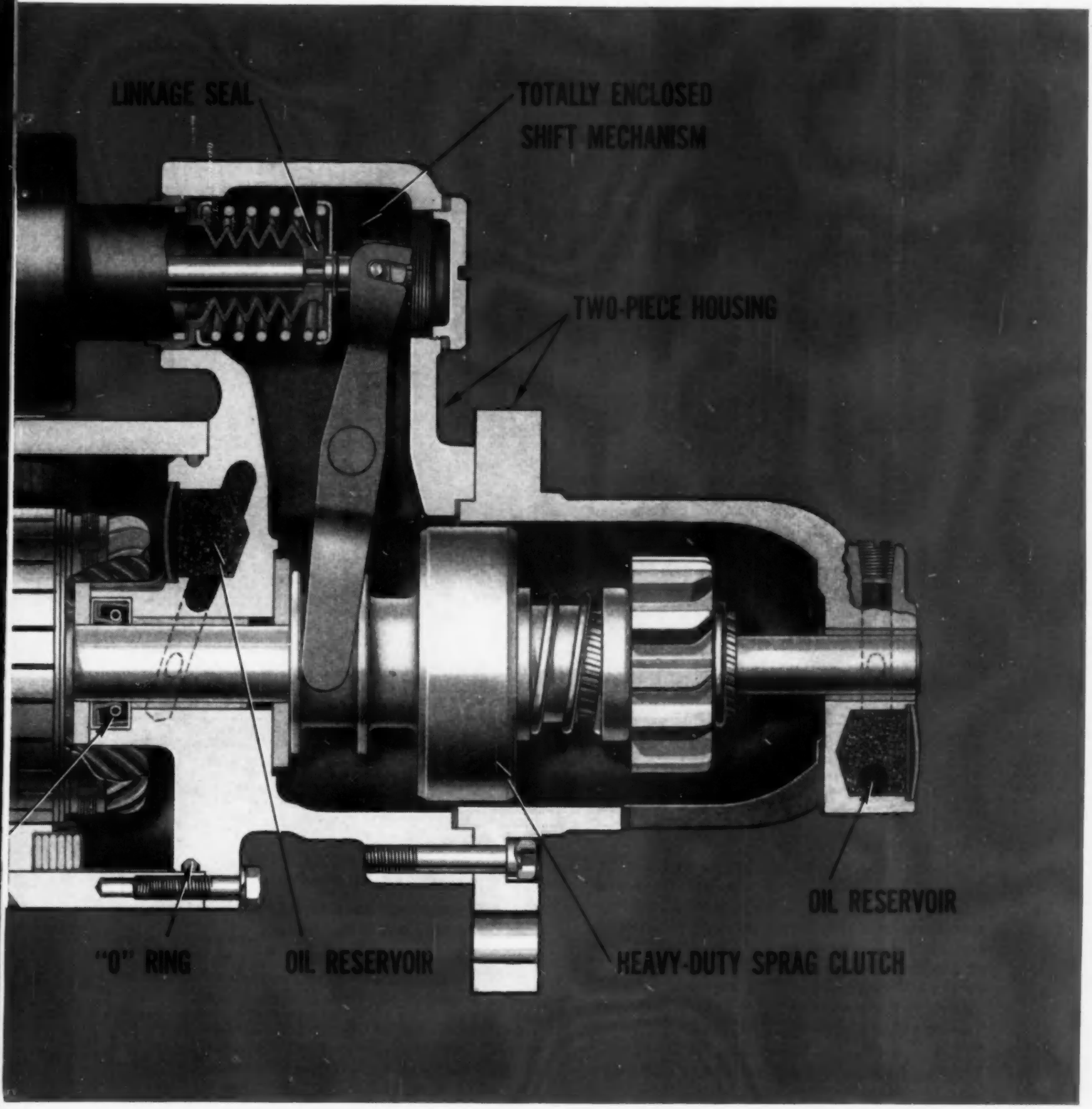


ANNOUNCING THE NEW DELCO-REMY TOTALLY

Delco-Remy now offers a completely new series of solenoid-operated, over-running clutch type heavy-duty cranking motors with the shift mechanism entirely enclosed. Special two-piece drive housings can be assembled to permit a total of 24 different solenoid positions with respect to motor mounting. New 50% longer brushes, together with sealing rings (optional) and large oil reservoirs (optional), assure extra-long operating time between overhauls. And Delco-Remy design features keep these heavy-duty cranking motors positively engaged until the engine starts. Engine manufacturers are invited to write directly to Delco-Remy for complete information and engineering assistance on the application of these new motors.

TOTALLY ENCLOSED DRIVE SHIFTING MECHANISM is protected against dirt, water, slush and ice. This enclosure plus the shaft seal and linkage seal also prevents transmission oil leakage.

TWO-PIECE DRIVE HOUSING DESIGN permits 24 different solenoid positions. Nose housings available in S.A.E. #2 and #3 mountings.



ENCLOSED HEAVY-DUTY CRANKING MOTORS

HEAVY-DUTY SOLENOID AND SWITCH provide positive pinion engagement and safely handle maximum starting current. Special seals increase contact life.

SPRAG CLUTCH DRIVE operates with non-chamfered ring gear. Pinion indexes on spiral spline, positively engages ring gear before power switches on, and does not become disengaged with sporadic engine firing.

HEAVIER BRUSH INSPECTION PLATES resist damage from use and handling—are sealed to prevent leakage to motor interior.

GENERAL MOTORS LEADS THE WAY—STARTING WITH

Delco-Remy

GM GENERAL MOTORS

ELECTRICAL SYSTEMS

DELCO-REMY • DIVISION OF GENERAL MOTORS • ANDERSON, INDIANA

MIDLAND TREADLE VALVES

NEW, IMPROVED MODEL SPEEDS BRAKING TIME

Here's a Treadle Type Foot Control Valve you can't beat for application and release time. Redesigned from beginning to end, it's compact, light, easily adapted to varying installation requirements . . . Trim, modern styling adds a lot to its appearance—and the tread is rubber-capped for extra safety's sake . . . We'll be glad to give you a demonstration, or furnish a sample for your examination.

M-R

MIDLAND-ROSS CORPORATION

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AIR
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BRAKES

ONE OF THE 400 LARGEST AMERICAN CORPORATIONS

use Airco's new Dip Transfer CO_2 Process

for ALL-POSITION WELDING OF

In welding mild sheet steel manually, there's only *one way to reduce costs and produce high quality welds* at the same time. Airco Dip Transfer CO_2 Process Welding. Let's be specific: –

- **The complete Airco Dip Transfer CO_2 package welds in all positions . . . manually!**
- **Welds are hydrogen-free.**
- **Virtually ends warpage – only low average currents are used for burn off.**
- **Creates little or no spatter.**
- **Handles typical steel joint fit ups.**
- **No flux needed.**
- **Penetrates deeply – critical for high quality.**
- **Welds much faster than flux-based processes.**
- **Uses money-saving Pureco CO_2 as shielding gas.**
- **The basic equipment welds all weldable metals.**

The Airco Dip Transfer CO_2 Process gives you consistently *high quality* welds at *lower costs* than any other process. For complete information, phone or write your nearest Air Reduction Representative. Ask for the new 24-page "DIP TRANSFER" Catalog.

Circle 180 on Inquiry Card, for more Data

Check up! Are the brake systems you offer as safe as they should be?

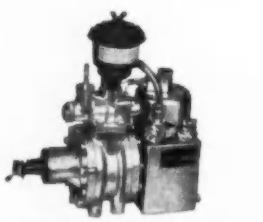
Wagner AIR BRAKE COMPONENTS

help increase safety and reduce truck operating costs

How do your brake systems rate? Wagner Air Brake Systems and components can help make your vehicles safer to operate, reduce "down time" and truck operating costs, build customer satisfaction.

Wagner offers a complete line of original equipment for air brakes and control systems. It includes rotary air compressors, brake application valves, vehicle protection valves, brake actuating units, moisture ejection valves, warning devices, air tanks, tractor-trailer hose couplers, air line hoses and air line connectors.

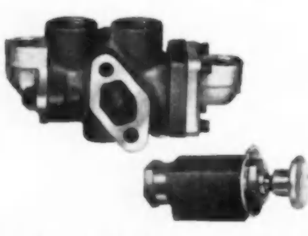
Wagner Air Brakes are the product of more than thirty-five years of brake engineering experience—gained in the designing and building of brake systems and brake parts for the automotive industry. When you equip the heavy-duty vehicles you manufacture with Wagner Air Brakes, you are adding safety and low-maintenance features that build customer acceptance.



ROTARY AIR COMPRESSORS are available in either 9 or 12 C. F. M. capacity. These Wagner Compressors have fast air recovery to assure an adequate supply of air pressure at all times. Rotary motion reduces vibration. Oil separation and cooling before air is discharged reduces temperature and prevents carbon formation.

FOOT OPERATED BRAKE APPLICATION VALVE, of the high capacity type, provides the driver with control of the vehicle brakes. It meters applied braking pressure in proportion to foot pressure exerted against brake pedal or treadle. The Wagner line also includes a HAND OPERATED APPLICATION VALVE. It provides independent control of trailer brakes.

RELAY QUICK-RELEASE VALVE controls the brakes on specific axles, acting in unison with the driver-controlled application valve. It automatically meters pressure directly from tank, speeding normal brake application and release. The relay valve is particularly suitable for the rear axles of long wheelbase vehicles.



TRACTOR PROTECTION and EMERGENCY BRAKE VALVES constitute a combination of two valves installed on the tractor. The emergency brake valve is a manual triggering unit for emergency braking the trailer and for actuating the tractor protection valve. The protection valve seals the tractor air lines.

MOISTURE EJECTION VALVE is fully automatic, operating in the 15-25 psi pressure range. Normal brake applications operate the valve, keeping reservoir clean and moisture-free. Expulsions occur without a notable drop in gauge pressure. Prevents accumulation of moisture or sludge in air tank.

LOW PRESSURE INDICATOR—buzzer or lamp—warns the driver of air braked vehicle if air pressure is below the safe driving range. In use, the warning circuit is controlled by a pneumatic switch which also is connected to the pressure side of the air brake system. Unit automatically closes the circuit if pressure drops below predetermined value.

Wagner Air Brake Systems and Air Brake Components for trucks, tractors, trailers, buses, and off-the-road equipment are fully described in CATALOG KU-201. Write today for your free copy.

WK58-6

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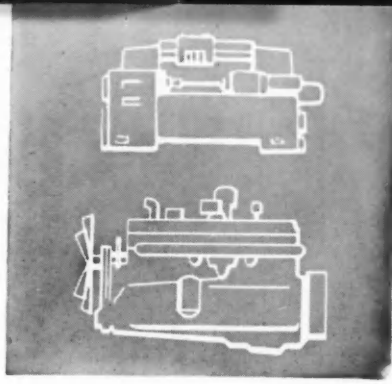
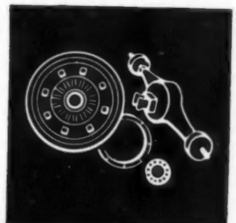
2

AUTOMOTIVE ENGINE SECTION



AUTOMOTIVE INDUSTRIES STATISTICAL ISSUE

FORTY-FIRST ANNUAL



PRODUCTION

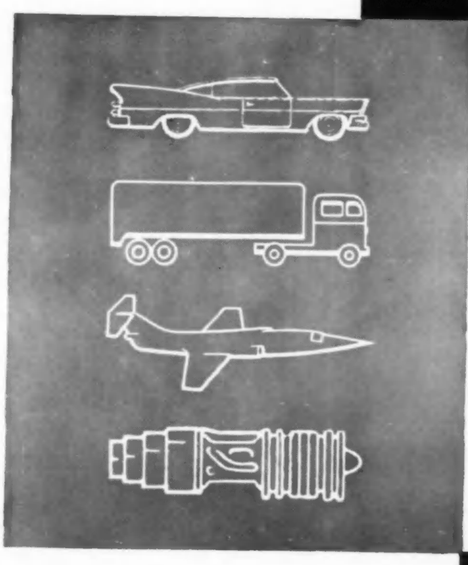
SPECIFICATIONS

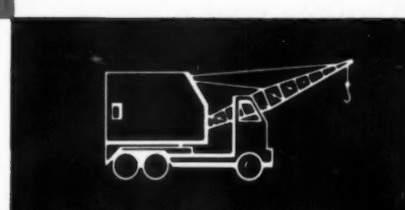
GASOLINE ENGINES

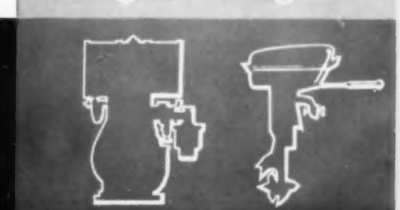
DIESEL ENGINES

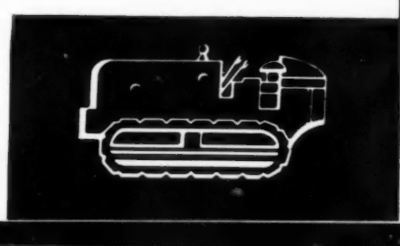
SMALL GASOLINE ENGINES

OUTBOARD MOTORS









1957 INTERNAL COMBUSTION ENGINE SHIPMENTS

(EXCEPT AUTOMOTIVE AND AIRCRAFT)

As reported by the Industry Division, Bureau of the Census

These data relate to engines designed primarily for use in generating power; oil and gas-field pumping; locomotives; agriculture machinery; tractors; power lawn mowers; inboard and outboard motor boats; air compressors; and similar applications.

Quantity and Value of Shipments by Type of Engine, by Years

Type of Engine	Total Engines Produced	Shipments: No. of Engines	Shipments: Value at Plant	Used in Product of Same Co.
1957				
Gasoline	4,923,718	4,136,318	$208,639,000	787,400
Diesel	126,961	58,133	241,310,000	68,828
Outboard	549,976	549,976	138,823,000	....
Gas	20,882	7,407	55,561,000	13,475
Total—1957	5,621,537	4,751,834	$644,333,000	869,703
1956				
Gasoline	5,883,349	5,050,341	$233,735,000	833,008
Diesel	140,814	56,462	214,830,000	84,352
Outboard	641,527	641,527	150,388,000	....
Gas	20,472	9,289	47,196,000	11,183
Total—1956	6,686,162	5,757,619	$646,149,000	928,543
1955				
Gasoline	4,932,259	4,017,848	$216,130,000	914,411
Diesel	139,231	60,778	191,612,000	78,453
Outboard	514,728	514,728	101,553,000	....
Gas	18,038	7,900	34,179,000	10,138
Total—1955	5,604,256	4,601,254	$543,474,000	1,003,002
1954				
Gasoline	3,669,505	2,993,575	$179,323,000	678,930
Diesel	104,686	48,639	172,271,000	56,047
Outboard	479,350	479,350	76,039,000	....
Gas	10,691	6,190	25,993,000	4,501
Total—1954	4,264,232	3,527,754	$453,626,000	736,478

1957 Gasoline Engine Shipments by Hp and Displacement

Size Group	Total Engines Produced	Shipments: No. of Engines	Shipments: Value at Plant	Used in Product of Same Co.
HORSEPOWER RATINGS				
Under 3	3,729,789	3,374,974	$ 79,366,000	354,815
3.0-3.9	398,638	335,042	11,309,000	63,596
4.0-5.9	202,210	85,529	5,672,000	116,681
6.0-6.9	69,322	41,327	3,196,000	27,995
7.0-10.9	85,791	75,207	7,661,000	10,584
11-15	63,098	32,785	6,404,000	23,512
16-20		6,801	2,007,000	
21-30	63,547	33,592	11,092,000	29,955
31-45	100,596	37,223	9,993,000	63,373
46-60	112,217	35,834	10,371,000	76,383
61-70	29,212	11,097	5,856,000	5,212
71-80		12,903	6,515,000	
81-90	4,957	4,957	2,312,000	....
91-100	47,581	18,576	8,168,000	11,138
101-150		17,867	14,107,000	
151-200		10,095	16,400,000	
201-300	16,760	2,292	6,300,000	4,156
301 and over		217	1,912,000	
Total—1957	4,923,718	4,136,318	$208,639,000	787,400
PISTON DISPLACEMENT				
Under 11	4,250,315	3,705,315	$ 89,924,000	545,010
11-30	224,487	189,337	13,850,000	35,150
31-40	7,686	5,966	1,040,000	1,720
41-50	63,988	13,545	3,525,000	14,501
51-75		35,942	6,979,000	
76-150	149,545	70,903	19,855,000	78,642
151-225	97,008	37,263	13,139,000	59,745
226-250	58,220	38,944	15,972,000	19,276
251-300	30,141	13,236	7,368,000	16,905
301-350	38,143	11,561	8,490,000	16,153
351-500		10,429	17,561,000	
501-600		1,498	2,469,000	
601-800		1,046	2,687,000	
801-900	4,185	475	1,287,000	298
901-2000		617	2,404,000	
2,001 and over		251	2,089,000	
Total—1957	4,923,718	4,136,318	$208,639,000	787,400

1957 Diesel Engine Shipments by Hp and Displacement

Size Group	Total Engines Produced	Shipments: No. of Engines	Shipments: Value at Plant	Used in Product of Same Co.
HORSEPOWER RATINGS				
Under 16	2,075	772	$ 1,417,000	1,303
16-40	6,116	3,652	2,754,000	1,335
41-50		1,129	1,014,000	
51-70	38,979	13,553	14,210,000	25,426
71-100	24,334	11,015	16,059,000	13,319
101-150	22,923	10,192	27,052,000	12,731
151-200	17,403	8,886	41,775,000	8,517
201-300	7,560	4,807	30,921,000	2,753
301-400		1,833	12,931,000	
401-500		845	18,713,000	
501-600		659	8,493,000	
601-700		106	5,538,000	
701-800	7,571	179	3,436,000	3,444
801-900		80	2,745,000	
901-1,000		84	4,383,000	
1,001-1,500		91	13,240,000	
1,501 and over		250	36,629,000	
Total—1957	126,961	58,133	$241,310,000	68,828
PISTON DISPLACEMENT				
Under 101	2,211	938	$ 1,677,000	1,273
101-150		5,071	5,711,000	
151-200	19,947	6,771	4,803,000	2,060
201-250		6,025	8,480,000	
251-300	25,256	12,428	19,672,000	12,828
301-400	24,726	3,348	5,652,000	21,378
401-600	27,246	10,482	38,054,000	16,764
601-800		5,649	22,832,000	
801-1,000	24,970	2,692	14,163,000	14,109
1,001-1,500		2,520	18,376,000	
1,501-2,000	1,387	601	12,056,000	111
2,001-3,000		675	14,380,000	
3,001-5,000		373	13,548,000	
5,001-10,000	1,137	285	21,808,000	285
10,001-25,000		194	21,809,000	
25,001 and over	81	81	18,309,000	....
Total—1957	126,961	58,133	$241,310,000	68,828

1957 Outboard Engine Shipments by Hp Ratings and Displacement

Size Group	No. of Engines	Value at Plant	Avg. Value per Engine
HORSEPOWER RATINGS			
Under 5.0	52,634	$ 4,613,000	$ 87.64
5.0-9.9	137,619	20,324,000	147.68
10.0-14.9	74,030	15,523,000	209.68
15.0-34.9	111,236	29,621,000	266.29
35.0 and over	174,457	68,742,000	394.03
Total—1957	549,976	$138,823,000	$252.42

Size Group	No. of Engines	Value at Plant	Avg. Value per Engine
PISTON DISPLACEMENT			
Under 9.9	122,616	$ 14,285,000	$116.50
10.0-14.9	72,501	11,569,000	159.57
15.0-19.9	113,049	24,962,000	220.81
20.0-29.9	45,228	12,630,000	279.25
30.0 and over	196,582	75,377,000	383.44
Total—1957	549,976	$138,823,000	$252.42

For Estimated Sales of Outboards and Number in Use, see page 195

1959 ... GASOLINE ENGINES

TRUCKS • BUSES • TRACTORS

Line Number	Engine Make and Model	Designed for	Number of Cylinders, Bore and Stroke (In.)	Maximum Brake Hp. at Specified R.P.M. With Bare Engine	Maximum Brake Hp. at Specified R.P.M. With Standard Accessories	Piston Displacement (Cu. In.)	Compression Ratio	Maximum Torque at R.P.M. (Lb. Ft.) with or without Accessories	Cylinder Liners—Type	Crankcase—Upper Half Integral with Cylinders	Arrangement	Exhaust Head Material (S.A.E. No.)	Valves: Max. Head Diameter (In.) Intake	Max. Head Diameter (In.) Exhaust	Min. Port Diameter (In.) Intake	Min. Port Diameter (In.) Exhaust	Lift (In.) Intake	Lift (In.) Exhaust	Stem Diameter (In.) Intake	Stem Diameter (In.) Exhaust
1	Allis-Chalmers B-125	Tr,Ind	4-3⅜x3½	30-1900	28.3-1900	125.2	6.25	92-1300 (EA)	W	In	I	Sil	1.43	1.31	1.26	1.03	.360	.360	.341	.341
2	4B-153	Tr,Ind	4-3 7/16x4⅛	47-2400	37-2000	153.0	6.00	112-1500 (BE)	W	In	I	2112	1.50	1.28	1.37	1.12	.429	.429	.312	.312
3	6B-230	Tr,Ind	6-3 7/16x4⅛	73-2400	57-2000	230.0	6.00	168-1000 (BE)	W	In	I	2112	1.50	1.28	1.37	1.12	.429	.429	.312	.312
4	G-149	Ind	4-3⅝x3½	....	40-1325	149.0	7.50	129-1300 (BE)	W	In	I	TP	1.44	1.31	1.26	1.37	.360	.360	.341	.341
5	G-226	Ind	4-4x4½		63-1225	226.0	7.25	211-1100 (BE)	W	In	I	TP	1.69	1.50	1.50	1.31	.360	.360	.371	.371
6	G-262	Tr	6-3 9/16x4⅜	86-2200	....	262.0	8.00	230-1300 (BE)	....	In	I	CNS	1.51	1.28	1.38	1.12	.429	.429	.310	.310
7	Arnelt DDT	M	4-2½x3⅛	....	20.2-2800	61.0	5.80	38-2800 (EA)	N	Se	I	21-1	1.13	.938	1.00	.813	.228	.250	.313	.313
8	Brennan 20	Ind	4-2¼x3⅛	20-3900	15-3900	50.0	7.40	34-3200 (EA)	N	Se	L	Sil	1.12	1.00	.875	.875	.250	.250	.312	.312
9	Imp.	M	4-2¼x3⅛	35-5000	20-4000	50.0	7.40	34-3200 (EA)	N	Se	I	Sil	1.12	1.00	.875	.875	.250	.250	.312	.312
10	CE	Ind	4-4½x5	54-1600	45-1600	318.0	5.00	203-1000 (EA)	N	Se	L	Sil	2.00	2.00	1.87	1.87	.375	.375	.375	.375
11	E-4	M	4-4½x5	54-1600	45-1600	318.0	5.00	203-1000 (EA)	N	Se	L	Sil	2.00	2.00	1.87	1.87	.375	.375	.375	.375
12	B-70	T,B,Tr,Ind	6-4x5½	90-2000	75-2000	415.0	4.50	278- 900 (EA)	N	Se	I	Sil	2.12	2.12	2.00	2.00	.375	.375	.437	.437
13	100	M	6-4x5½	94-2000	80-2000	415.0	6.00	278- 900 (EA)	N	Se	I	Sil	2.12	2.12	2.00	2.00	.375	.375	.437	.437
14	B-100	T,B,Tr,Ind	6-4⅜x5½	94-2000	80-2000	496.0	4.50	350-1200 (EA)	N	Se	I	Sil	2.12	2.12	2.00	2.00	.375	.375	.437	.437
15	125	M	6-4⅜x5½	110-2200	94-2200	496.0	6.00	350-1200 (EA)	N	Se	I	Sil	2.12	2.12	2.00	2.00	.375	.375	.437	.437
16	150	M	6-4½x6½	150-2000	130-2000	620.3	6.00	500-1200 (EA)	N	Se	I	Sil	2.50	2.50	2.12	2.12	.437	.437	.500	.500
17	Chevrolet Thriftmaster	T	6-3 9/16x3 15/16	135-4000	115-3600	235.5	8.25	217-2000 (BE)	N	In	I	HAS	1.88	1.51	1.44	1.28	.310	.333	.341	.341
18	Thriftmaster Special	T	6-3 9/16x3 15/16	135-4000	110-3600	235.5	8.25	217-2000 (BE)	N	In	I	HAS	1.88	1.51	1.44	1.28	.310	.333	.341	.341
19	Jobmaster	T,B,Tr	6-3¾x3 15/16	150-4000	130-3800	261.0	8.00	235-2000 (BE)	N	In	I	HAS*	1.88	1.51	1.44	1.28	.310	.412	.341	.341
20	Trademaster	T,B,Tr	8-3⅞x3	160-4200	137-4000	283.0	8.50	270-2000 (BE)	N	In	I	HAS	1.72	1.51	1.59	1.32	.334	.334	.342	.341
21	Taskmaster	T,B,Tr	8-3⅞x3	160-4200	137-4000	283.0	8.00	270-2000 (BE)	N	In	I	HAS*	1.72	1.51	1.59	1.32	.334	.334	.342	.341
22	Loadmaster	B	8-4x3 3/16	195-4000	170-4000	322.0	7.70	310-2200 (BE)	N	In	I	HAS*	1.75	1.38	1.59	....	.378	.377	.372	.371
23	Super Taskmaster	T,Tr	8-3⅞x3	175-4400	160-4000	283.0	8.00	275-2400 (BE)	N	In	I	HAS*	1.72	1.51	1.59	1.32	.334	.334	.342	.341
24	Workmaster	T,Tr	8-4⅛x3¼	230-4400	194-3800	348.0	8.00	335-2800 (BE)	N	In	I	HAS*	1.94	1.54	1.83	1.50	.400	.412	.371	.371
25	Workmaster Special	T,B,Tr	8-4⅛x3¼	185-4000	160-3600	348.0	7.75	315-2200 (BE)	N	In	I	HAS	1.94	1.54	1.83	1.50	.400	.412	.371	.371
26	Chris-Craft A, ■B	M	4-3¼x4	....	60-3200	132.7	6.78	108-2400 (EA)	N	In	L	2112N	1.48	1.36	1.25	1.12	.312	.312	.310	.310
27	■*K	M	6-3 7/16x4⅛	....	95-3200	229.7	7.21	173-1800 (EA)	N	In	L	2112N	1.64	1.40	1.50	1.25	.311	.311	.310	.310
28	■*KL	M	6-3 7/16x4¼	....	105-3200	236.6	7.40	190-2200 (EA)	N	In	L	2112N	1.64	1.40	1.50	1.25	.311	.311	.310	.310
29	KFL	M	6-3 7/16x4¼	....	131-3800	236.6	7.40	192-2800 (EA)	N	In	L	Aus	1.64	1.40	1.50	1.25	.344	.344	.313	.313
30	■*M	M	6-4x4¼	....	130-3000	320.4	6.95	239-2400 (EA)	N	In	L	2112N	1.83	1.68	1.81	1.50	.356	.356	.372	.372
31	■MCL	M	6-4x4½	....	175-3400	339.2	7.22	291-1800 (EA)	N	In	L	Aus	1.83	1.67	1.72	1.50	.387	.379	.375	.375
32	■*WB	M	6-4¼x4¾	....	200-3200	404.3	6.92	370-1600 (EA)	N	In	L	2112N	1.92	1.78	1.75	1.62	.442	.442	.372	.372
33	283	M	8-3⅞x3	....	185-4000	283.0	8.00	261-3000 (EA)	N	In	I	21-4N	1.72	1.50	1.59	1.32	.269	.275	.342	.342
34	Chrysler M-44-S3	M	8-3⅝x3¼	....	155-3800	270.0	7.60	228-3000 (EA)	N	In	I	Sil*(y)	1.75	1.41	1.44	1.29	.377	.376	.372	.434
35	M-45-S3	M	8-3 15/16x3⅝	....	225-3800	354.0	8.20	327-2700 (EA)	N	In	I	Sil*(y)	2.01	1.75	1.65	1.64	.377	.376	.373	.433
36	M-46-3	M	6-3¼x4⅝	....	95-3200	230.0	6.60	187-1400 (EA)	N	In	L	Sil	1.53	1.41	1.23	1.30	.379	.379	.340	.340
37	M-46-S-3	M	6-3¼x4⅝	....	110-3600	230.0	7.00	190-1600 (EA)	N	In	L	Sil	1.53	1.41	1.23	1.30	.379	.379	.340	.340
38	M-47-3	M	6-3 7/16x4¾	....	125-3600	265.0	7.00	220-1600 (EA)	N	In	L	Sil	1.72	1.53	1.53	1.38	.410	.370	.340	.340
39	M-47-S-3	M	6-3 7/16x4¾	....	135-3600	265.0	7.00	225-2100 (EA)	N	In	L	Sil(x)	1.72	1.53	1.58	1.38	.410	.379	.340	.434
40	M-45-SP-3	M	8-3 15/16x3⅝	....	275-4400	354.0	8.20	340-3900 (EA)	N	In	I	Sil*(y)	2.01	1.75	1.65	1.64	.444	.435	.373	.433
41	Ind. 30	Ind	6-3¼x4⅝	99-3600	66-2400	230.0	7.00	190-1200 (BE)	N	In	L	CNS	1.53	1.40	1.40	1.29	.379	.379	.340	.340
42	Ind. 32	Ind	6-3 7/16x4¾	120-3600	79-2400	265.0	6.80	225-1200 (BE)	N	In	L	CNS	1.71	1.50	1.58	1.37	.379	.379	.341	.340
43	Ind. 54	Ind	8-3⅝x3 13/16	173-4000	114-2800	315.0	7.50	265-2500 (BE)	N	In	I	CNS	1.76	1.40	1.63	1.29	.368	.375	.372	.433
44	Ind. 56A	Ind	8-3 15/16x3⅝	188-4000	135-2800	354.0	7.50	332-2000 (BE)	N	In	I	CNS	2.01	1.76	1.82	1.63	.381	.357	.372	.372
45	M-80	M	8-3 29/32x3 5/16	....	177-3600	318.0	8.20	291-1600 (BE)	N	In	I	CNS	1.84	1.56	1.50	1.48	.390	.390	.373	.372
46	Climax R-110	Ind	4-6⅛x7	130-1200	118-1200	824.0	5.20	600- 800 (BE)	N	Se	I	Eat	2.50	2.50	2.25	2.25	.500	.500	.560	.560
47	R-165	Ind	6-6⅛x7	192-1200	173-1200	1238.0	5.20	925- 750 (BE)	N	Se	I	Eat	2.50	2.50	2.25	2.25	.500	.500	.560	.560
48	K-67	Ind	6-7x7	264-1200	250-1200	1616.0	5.20	1220- 850 (BE)	W	Se	I	Eat	2.75	2.63	2.50	2.37	.687	.687	.560	.560
49	K-75	Ind	6-7½x7	304-1200	280-1200	1855.0	5.56	1420- 850 (BE)	W	Se	I	Eat	2.75	2.63	2.50	2.37	.687	.687	.560	.560
50	V-80	Ind	8-7x7	340-1200	320-1200	2155.0	5.20	1600- 800 (BE)	W	Se	I	Eat	2.75	2.63	2.50	2.37	.687	.687	.560	.560
51	V-85	Ind	8-7½x7	390-1200	370-1200	2474.0	5.56	1875- 800 (BE)	W	Se	I	Eat	2.75	2.63	2.50	2.37	.687	.687	.560	.560
52	V-122	Ind	12-7x7	520-1200	465-1200	3232.0	5.20	2460- 750 (BE)	W	Se	I	Eat	2.75	2.63	2.50	2.37	.687	.687	.560	.560
53	V-125	Ind	12-7½x7	605-1200	545-1200	3711.0	5.56	2900- 850 (BE)	W	Se	I	Eat	2.75	2.63	2.50	2.37	.687	.687	.560	.560
54	Continental N-4062	Tr	4-2⅜x3½	26.3-3500	....	62.0	6.60	39.5-1200 (BE)	N	In	L	Op	.895	.895	.750	.750	.187	.187	.314	.312
55	N-56	Ind	4-2¼x3½	14.2-2200	....	56.0	6.80	39.5-1200 (BE)	W	....	L	Op	1.00	.895	....	....	....	....	.315	.313
56	N-62	Ind	4-2⅜x3½	18-2200	....	62.0	6.46	41.8-1200 (BE)	N	In	L	Op	.895	.895	.750	.750	.187	.187	.314	.312
57	Y-69	Ind	4-2½x3½	21.4-2400	....	69.0	6.60	48-2000 (BE)	N	In	L	Op	1.20	1.01	1.06	.875	.296	.281	.314	.313
58	Y-4069	Tr	4-2½x3½	28-3400	....	69.0	....	51-2000 (BE)	N	In	L	Op	1.20	1.01	1.06	.875	.296	.281	.314	.313
59	Y-91	Ind	4-2⅞x3½	28.5-2400	....	91.0	6.60	67-1600 (BE)	N	In	L	Op	1.20	1.01	1.06	.875	.296	.281	.314	.313
60	Y-4091	C,Tr	4-2⅞x3½	36-3400	....	91.0	....	70-1500 (BE)	N	In	L	Op	1.20	1.01	1.06	.875	.296	.281	.314	.313
61	E201	Ind	4-3⅝x4⅞	65.5-2400	....	201.0	6.30	171-1200 (BE)	W	In	I	Sil	1.45	1.36	1.16	1.19	.230	.230	.341	.339
62	F244	Ind	6-3 7/16x4⅜	79-2400	....	244.0	6.90	192-1200 (BE)	N	In	L	XCR	1.52	1.21	1.38	1.19	.329	.334	.341	.339
63	J382	Ind	4-4½x6	74.2-1400	....	382.0	5.82	283-1000 (BE)	W	In	I	Sil	1.77	1.65	1.63	1.50	.249	.249	.435	.433
64	Y-112	Ind	4-3 3/16x3½	32-2400	....	112.0	6.60	82-1200 (BE)	N	In	L	Op	1.20	1.01	1.06	.875	.296	.281	.314	.313
65	F-124	Ind	4-3x4⅜	36.5-2400	....	124.0	6.30	91-1200 (BE)	N	In	L	Op	1.51	1.20	1.37	1.18	.281	.281	.341	.334
66	F-4124	C,T,Tr	4-3x4⅜	47-3200	....	124.0	....	94-1500 (BE)	N	In	L	Op	1.51	1.32	1.37	1.18	.281	.281	.341	.336
67	G-134	Ind	4-3⅛x4⅜	34-2000	....	134.0	6.60	107-1100 (BE)	....	....	I	Op	....	....	....	....	....	....	....	....
68	F-140	Ind	4-3 3/16x4⅜	42-2400	....	140.0	6.40	106-1200 (BE)	N	In	L	Op	1.51	1.20	1.37	1.18	.281	.281	.341	.337
69	F-4140	C,T,Tr	4-3 3/16x4⅜	52-3200	....	140.0	....	106-1600 (BE)	N	In	L	Op	1.51	1.32	1.37	1.18	.281	.281	.341	.339
70	G-157	Ind	4-3⅜x4⅜	40-2000	....	157.0	....	124-1100 (BE)	W	In	I	Op	1.32	1.20	1.19	1.09	.312	.312	.341	.339
71	F-162	Ind	4-3 7/16x4⅜	49-2400	....	162.0	6.40	124-1200 (BE)	N	In	L	Op	1.51	1.20	1.37	1.18	.281	.281	.341	.337
72	F-4162	C,T,Tr	4-3 7/16x4⅜	58-3200	....	162.0	....	122-1500 (BE)	N	In	L	Op	1.51	1.20	1.37	1.18	.281	.281	.341	.337
73	H-227	Ind	4-3⅝x5½	54-1800	....	227.0	5.65	198-1000 (BE)	W	In	I	Op	1.64	1.45	1.50	1.31	.343	.343	.437	.438
74	H-243	Ind	4-3¾x5½	57.8-1800	....	243.0	5.65	213-1000 (BE)	W	In	I	Op	1.64	1.45	1.50	1.31	.343	.343	.437	.437
75	H-260	Ind	4-3⅞x5½	62-1800	....	260.0	....	226-1000 (BE)	W	In	I	Op	1.64	1.45	1.50	1.31	.343	.343	.437	.437
76	F-186	Ind	6-3x4⅜	60.5-2400	....	186.0	....	147-1200 (BE)	N	In	L	Op	1.51	1.32	1.37	1.18	.296	.296	.341	.337
77	F-6186	C,T,Tr	6-3x4⅜	77-3500	....	186.0	6.70	142-1600 (BE)	N	In	L	Op	1.51	1.32	1.37	1.18	.296	.281	.341	.337
78	F-209	Ind	6-3 3/16x4⅜	68-2400	....	209.0	....	165-1200 (BE)	N	In	L	Op	1.51	1.20	1.37	1.18	.296	.296	.341	.337
79	F-6209	C,T,Tr	6-3 3/16x4⅜	90-3500	....	209.0	6.70	160-1500 (BE)	N	In	L	Op	1.51	1.32	1.37	1.18	.296	.281	.341	.339

For abbreviations, see pages 182 and 183

For Directory of the Engine Manufacturers listed above, see Table of Contents

GASOLINE ENGINES ...1959

MARINE • INDUSTRIAL

Valves: Angle (Deg.)	Valves: Seats: Inserts Used?	Valves: Seats: Insert Material (S.A.E. No.)	Camshaft Drive—Type	Pistons: Material	Pistons: Weight with Pins, Rings, Bushings (Oz.)	Pistons: Piston Pin—Diameter and Length (In.)	Number of Rings per Piston	Connecting Rods: Material	Connecting Rods: Center to Center Length (In.)	Connecting Rods: Weight with Bushing and Cap (Oz.)	Crankshaft: Material	Crankshaft: Counter Balance Used	Crankshaft: Crank-Pin Diameter and Length (In.)	Crankshaft: Main Bearings: Number	Crankshaft: Main Bearings: Diameter and Length (In.): Front	Crankshaft: Main Bearings: Diameter and Length (In.): Rear	Oil Pressure to—	Carburetor: Make	Carburetor: Size	Engines Weight without Carburetor or Ignition (Lb.)	Overall Dimensions (In.): Width	Overall Dimensions (In.): Height	Overall Dimensions (In.): Length	Clutch Housing (S.A.E. Nos.)	Line Number
45	N	TP	HG	Al	25	.813x2.87	4	1040	6½	29	1045	N	1.93x1.22	3	2.25x1.62	2.25x1.50	adfg	Zen	⅞	370	16 5/16	31⅝	25 9/16	5	1
45	N	......	HG	CI	......	1.00x2.84	4	CS	7⅝	......	1045	N	2.00x1.31	3	2.50x1.25	2.50x1.75	abcdfg	Zen	1	500	18 3/16	26⅞	30 3/16	2,3,4	2
45	N	......	HG	CI	......	1.00x	4	1045	7⅝	......	1045	N	2.00x1.31	7	2.50x1.25	2.50x1.75	abcdfg	Zen	1	625	18 3/16	26⅞	38 3/16	2,3,4	3
45	E	XB	HG	Al	......	.813x2.88	4	1040	6½	......	1045	....	1.94x1.22	3	2.75x1.25	2.75x1.50	abcdf	MaS	1	......	......	......	......	4	4
(h)	E	XB	HG	Al	......	.990x3.51	4	1040	7½	......	1045	....	2.38x1.44	3	3.00x1.25	3.00x1.25	abcdf	Zen	1	......	......	......	......	4	5
45	E	4140	HG	Ala	2¾	1.00x2.97	5	1035	7⅝	3	1035	....	2.00x1.50	7	2.50x1.25	2.50x1.75	abcdf	MaS	1¼	650	22 21/32	29 11/32	39 3/16	4	6
....	Op	......	SG	Al	......	.625x2.13	3	1045	6	......	1045	....	1.56x1.25	2	1.38x2.83	1.38x2.83	cdg	Zen	¾	281	17¼	18⅝	29¾	......	7
45	N	......	HG	Al	6	.625x2.00	3	1045	5¾	14	1045	Y	1.31x1.25	3	2.50x1.50	2.50x1.50	abcdg	Tll	¾	128	12¾	17⅝	18¾	......	8
45	N	......	HG	Al	6	.625x2.00	3	1045	5¾	14	1045	N	1.31x1.25	3	2.50x1.50	2.50x1.50	abcdg	Tll	11/16	165	12¾	17⅝	29	......	9
45	N	......	HG	SS	80	1.17x4.00	4	1045	11	64	1045	N	2.50x2.50	3	2.50x4.25	2.50x3.50	abcdg	Str	1¼	600	21	29¾	37⅛	......	10
45	N	......	HG	SS	72	1.17x4.00	5	1045	11	64	1045	N	2.50x2.50	3	2.50x4.25	2.50x3.50	abcdfg	Str	1¼	950	16	18	53	......	11
45	N	......	HG	SS	64	1.17x3.87	4	CNS	11	65	CNS	N	2.50x2.00	3	2.75x4.50	2.75x3.00	acdg	Str	1½	800	25¾	33¾	49	......	12
45	N	......	HG	SS	64	1.17x3.87	4	AS	......	......	CNS	N	2.50x2.00	3	2.75x4.50	2.75x3.00	abcdfg	Str	1½	800	19¾	24¾	65	......	13
45	N	......	HG	SS	76	1.25x3.87	5	CNS	11	65	CNS	N	2.50x2.00	3	2.75x4.50	2.75x3.00	acdg	Str	1½	875	25¾	33¾	49	......	14
45	N	......	HG	SS	70	1.25x3.87	5	AS	11	65	CNS	N	2.50x2.00	3	2.75x4.50	2.75x4.50	abcdfg	Str	1½	900	19¾	24¾	65	......	15
45	N	......	BG	SS	72	1.37x4.00	5	AS	12	80	CNS	Y	2.62x2.67	7	2.62x5.00	2.63x3.50	abcd	Str	1¾	1450	20	30	74	......	16
(h)	N	......	HG	Als	18.7	.866x3.19	3	DFS	6 13/16	28	SF	....	2.31x1.25	4	2.69x1.06	2.78x1.19	abcdfgi	R-P	1½	552	21⅞	31 11/32	40½	......	17
(h)	N	......	HG	Als	18.7	.866x3.19	3	DFS	6 13/16	28	SF	....	2.31x1.25	4	2.69x1.06	2.78x1.19	abcdfgi	Car	1½	554	21⅞	31 11/32	40½	......	18
(l)	N	......	HG	Als	22.6	.927x3.38	3	DFS	6 13/16	31	SF	....	2.31x1.25	4	2.69x1.06	2.78x1.19	abcdfgi	R-P	1½	556	23 11/32	31 11/32	40 11/32	......	19
(n)	N	......	Ch	Als	20.4	.927x3.01	3	DFS	5 43/64	19	SF	....	2.00x1.90	5	2.30x.762	2.30x1.16	abcdfgi	R-P	1¼	528	28 9/16	27 9/32	34 43/64	......	20
(m)	N	......	Ch	Als	20.4	.927x3.01	3	DFS	5 43/64	19	SF	....	2.00x1.90	5	2.30x.762	2.30x1.16	abcdfgi	R-P	1¼	524	28 9/16	27 9/32	34 43/64	......	21
45	N	......	Ch	Al	19.9	.940x3.40	3	DFS	6	30	SF	....	2.25x2.00	5	2.50x.960	2.50x1.04	abcdfgi	R-P	1¼	693	29⅝	38 11/32	38 11/32	......	22
(m)	N	......	Ch	Als	20.4	.927x3.01	3	DFS	5 43/64	19	SF	....	2.00x1.90	5	2.30x.762	2.30x1.16	abcdfgi	R-P	1¼	524	28 9/16	27 9/32	34 43/64	......	23
(n)	N	......	Ch	Als	27.4	.990x3.26	3	DFS	6 7/64	24	SF	....	2.20x2.00	5	2.50x1.02	2.50x1.30	avcdfgi	R-P	....	791	27 7/16	30⅝	40¼	......	24
(n)	N	......	Ch	Als	27.4	.990x3.26	3	SF	6⅛	......	SF	....	2.20x2.00	5	2.50x1.02	2.50x1.30	abcdef	R-P	1¼	785	27 7/16	30⅝	40¼	......	25
30	N	......	HG	Alt	21	.750x2.83	3	3140	6 9/16	22	DFS‡	N	1.75x1.12	3	1.98x1.62	1.98x1.37	acr	Zen	1¼	456*	24⅛	22 13/16	31 3/32	......	26
30	N	......	HG	Ala	25	.875x2.92	3	1035	7	29	DFS‡	N	1.98x1.25	7	2.49x1.53	2.49x1.15	acdr	Zen	1⅝	626*	24⅛	21⅝	40	......	27
30	N	......	HG	Alt	26	.875x2.92	3	1035	7	29	DFS‡	Y	1.98x1.25	7	2.49x1.53	2.49x1.15	acdr	Zen	1½	626*	25 3/16	22 1/32	40	......	28
30	E	7	HG	Alt	26	.875x2.92	3	1035	7	29	DFS‡	....	1.98x1.25	7	2.49x1.53	2.49x1.15	acdr	Zen(2)	1½	715*	22⅝	22 1/32	40	......	29
30	N	......	HG	Ala	36	1.00x3.52	3	1040	8	40	DFS‡	N	1.98x1.50	7	2.49x1.74	2.49x1.15	acdr	Zen	1¾	850*	26 3/16	23 13/16	46 3/16	......	30
30	N	......	HG	Atn	46	1.13x3.44	4	3140	8	40	DFS‡	....	2.00x1.50	7	2.50x1.72	2.50x1.13	acder	Zen(2)	1¾	940*	26 13/16	23 13/16	46 13/16	......	31
30	N	......	HG	Atn	55	1.31x3.62	4	3140	8⅞	55	DFS	....	2.25x1.50	7	2.62x2.21	2.62x1.43	acder	Zen(2)	1¾	1260*	27 13/16	27 3/16	53 7/16	......	32
46	......	......	Ch	Alst	29	.927x3.00	3	C1037	5 11/16	20	C1045	....	2.00x1.90	5	2.30x1.69	2.30x.802	acdf	C-R	....	663*	27⅝	28 11/16	39¼	......	33
45	E	Eat	HG	Alst	16.2°°	.859x2.89	3	MA	5 13/16	21.2	DFS	Y	1.94x1.81	5	2.38x1.81	2.38x1.06	acdfg	Car#	1 1/16	966*	32½	30 3/16	41½	N	34
45	E	Eat	HG	Alst	23.3°°	.984x3.15	3	MA	6⅝	25.2	DFS	Y	2.25x2.00	5	2.50x1.88	2.50x1.13	acdef	Car(2)	1 1/16	1059*	32½	30¼	45⅜	N	35
45	E	Eat	HG	Alt	15.7	.859x2.75	4	MS	7 13/16	30.1	DFS	Y	2.06x1.25	4	2.50x1.88	2.50x1.24	acdg	Zen	1¼	743*	22½	25⅝	43½	N	36
45	E	Eat	HG	Alt	15.7	.859x2.75	4	MS	7 13/16	30.1	DFS	Y	2.06x1.25	4	2.50x1.88	2.50x1.24	acdg	Zen	1½	751*	22½	25⅝	43½	N	37
45	E	Eat	HG	Alt	25.0	.859x2.88	3	MS	7.875	32.4	DFS	Y	2.12x1.22	4	2.50x1.88	2.50x1.24	acdg	Zen	1½	814*	22½	25⅝	45⅞	N	38
45	E	Eat	HG	Alt	25.0	.859x2.88	3	MS	7.875	32.4	DFS	Y	2.12x1.22	4	2.50x1.88	2.50x1.24	acdg	Zen(2)	1½	822*	28	26⅛	45⅞	N	39
45	E	Eat	HG	Alst	23.3°°	.984x3.15	3	MA	6⅝	25.2	DFS	Y	2.25x2.00	5	2.50x1.88	2.50x1.13	acdef	Car(2‡‡	1¼	1071*	32½	30¼	45⅜	N	40
45	E	Sil	Ch	CI	......	.859x2.75	4	1041	7 13/16	......	1046	....	2.06x1.25	4	2.50x1.23	2.50x1.58	acd	Car	1 1/16	575	20½	32	32½	3,4	41
45	E	Sto	Ch	CI	......	.859x2.87	4	1041	7¾	......	1046	....	2.13x1.38	4	2.50x1.55	2.50x1.58	acd	Car	1 1/16	740	20⅜	32 15/16	34 15/16	3,4	42
45	E	Eat	Ch	Al	......	.920x3.06	3	1041	6⅝	......	1046	....	2.25x1.81	5	2.50x.837	2.50x1.56	acdf	Str	1 1/16	591	29¾	39	31 15/16	3	43
45	E	Eat	Ch	Al	......	.980x3.14	3	1041	6⅝	......	1046	....	2.25x2.00	5	2.50x.910	2.50x1.62	acdf	Str	1 1/16	855	28 11/16	35 11/16	33⅝	3	44
45	N	......	Ch	Alst	21°°	.984x3.00	3	MA	6¼	25.6	DFS	....	2.13x1.88	5	2.50x1.56	2.50x.872	acdfg	Car(2)	1¼	898*	27½	24⅝	39 11/16	N	45
45	E	Eat	HG	Al	164	1.49x5.37	4	3135	16	224	4140	....	3.00x3.50	3	3.25x3.81	3.25x4.50	acdefg	Zen	2	2300	31 1/16	49½	57 1/16	1,0	46
45	E	Eat	HG	Al	164	1.49x5.37	4	3135	16	224	4140	....	3.00x3.50	4	3.25x3.81	3.25x4.50	acdefg	Zen(2)	1¾	3200	29⅛	51⅝	73 13/16	1,0	47
45	E	Eat	HG	Al	176	2.00x5.75	5	1040	16	279	4140	N	4.00x2.88	7	4.50x3.75	4.50x3.75	abcdfg	Zen	2½	5400	33	57	77½	0	48
45	E	Eat	HG	Al	256	2.00x6.25	5	1040	16	279	4140	N	4.00x2.88	7	4.50x3.75	4.50x3.75	abcdfg	Zen	2½	5600	33	57	77½	0	49
45	E	Eat	HG	Al	176	2.00x5.75	5	3135	16	276	4140	N	4.00x5.00	5	4.50x3.75	4.50x5.50	abcdfg	Zen(2)	2	8200	51	56	72¼	00	50
45	E	Eat	HG	Al	256	2.00x6.25	5	1040	16	279	4140	N	4.00x5.00	5	4.50x3.75	4.50x5.50	abcdfg	Zen(2)	2	8400	51	56	72¼	00	51
45	E	Eat	HG	Al	176	2.00x5.75	5	3135	16	276	4140	N	4.75x5.25	7	5.50x4.25	5.50x5.38	abcdfg	Zen(4)	2	11200	51	56	95	00	52
45	E	Eat	HG	Al	256	2.38x6.25	5	1040	16	368	4140	N	4.75x5.25	7	5.50x4.25	5.50x5.38	abcdfg	Zen(4)	2	11600	51	56½	95	00	53
(h)	E	SA	HG	CI	......	.543x1.92	3	1035	5¾	......	DFS	N	1.50x1.02	....	2.00x....	2.00x1.25	......	......	....	170	16	19	19	5	54
(h)	E	SA	HG	Al	......	.543x1.92	3	1035	5¾	......	DFS	N	1.50x1.00	....	......	......	......	......	....	......	......	......	......	......	55
(h)	Op	SA	HG	CI	......	.543x1.92	3	1035	5¾	......	DFS	N	1.50x1.00	....	2.00x1.39	2.00x1.25		Op	Op	170	16	19	19	5	56
(h)	Op	SA	HG	CI	......	.708x2.06	3	1030	5¾	......	DFS	N	1.50x1.18	3	1.75x1.37	1.75x1.78	acdgt	Op	Op	265	14 3/16	22 13/16	25½	5	57
(h)	Op	SA	HG	CI	......	.703x2.06	3	1030	5¾	......	DFS	N	1.50x1.18	3	1.75x1.37	1.75x1.78	acdgt	Op	Op	290	14 3/16	22 13/16	25½	5	58
(h)	Op	SA	HG	CI	......	.708x2.44	3	1030	5¾	......	DFS	N	1.50x1.18	3	1.75x1.37	1.75x1.78	acdgt	Op	Op	265	14 3/16	22 13/16	25½	5	59
(h)	Op	SA	HG	CI	......	.703x2.44	3	1030	5¾	......	DFS	N	1.50x1.18	3	1.75x1.37	1.75x1.78	acdgt	Op	Op	290	14 3/16	22 13/16	25½	5	60
(h)	E	SA	HG	Al	......	1.11x3.07	4	1035	8⅜	......	1046	....	2.25x1.56	3	2.81x1.34	2.81x1.56	acdfg	Op	....	540	......	......	......	N	61
(h)	E	SA	HG	Al	......	.859x2.88	4	1035	7 1/16	......	1045	....	2.06x1.31	4	2.56x1.06	2.56x1.48	acd	Op	....	......	......	......	......	4	62
(h)	E	SA	HG	Al	......	1.50x3.72	4	1035	10½	......	1045	....	2.75x1.81	4	3.50x1.88	3.50x2.00	afg	Op	....	830				N	63
(h)	Op	SA	HG	CI	......	.708x2.75	3	1030	5¾	......	DFS	N	1.50x1.18	3	1.75x1.28	1.75x1.65	acdgt	Op	Op	265	14 3/16	22 13/16	25½	5	64
(h)	Op	SA	HG	CI	......	.859x2.50	4	1030	7	......	DFS	N	1.93x1.31	3	2.25x1.18	2.25x1.89	acdgt	Op	Op	370	15¾	26 13/16	26 7/16	4	65
(h)	Op	SA	HG	CI	......	.859x2.50	4	1030	7	......	DFS	N	1.93x1.31	3	2.25x1.18	2.25x1.89	acdgt	Op	Op	395	26	26 13/16	29 7/16	4,3	66
....	E	SA	HG	Al	......	......	....	1035	7	......	DFS	N	......	....	......	......	......	......	....	......	......	......	......	......	67
(h)	Op	SA	HG	CI	......	.859x2.68	4	1030	7	......	DFS	N	1.93x1.31	3	2.25x1.18	2.25x1.89	acdgt	Op	Op	370	26	26 13/16	29 7/16	4	68
(h)	Op	SA	HG	Al	......	.859x2.68	4	1030	7	......	DFS	N	1.93x1.31	3	2.25x1.18	2.25x1.89	acdgt	Op	Op	395	26	26 13/16	29 7/16	4	69
(h)	Op	SA	HG	Al	......	1.12x2.75	4	1035	7	......	DFS	N	2.06x....	3	2.37x1.53	2.37x1.68	......	Op	Op	475	16 15/16	19 15/16	26 15/16	4,3	70
(h)	Op	SA	HG	Al	......	.859x2.87	4	1030	7	......	DFS	N	1.93x1.31	3	2.25x1.18	2.25x1.89	acdgt	Op	Op	370	26	26 13/16	29 7/16	4	71
(h)	Op	SA	HG	Al	......	.859x2.87	4	1030	7	......	DFS	N	1.93x1.31	3	2.25x1.18	2.25x1.89	acdgt	Op	Op	395	26	26 13/16	29 7/16	4,3	72
(h)	Op	SA	HG	Al	......	1.25x3.31	4	1035	9½	......	DFS	N	2.50x1.18	3	2.87x1.81	2.87x2.06	acdg	Op	Op	645	19¾	33 13/16	30½	......	73
(h)	Op	SA	HG	Al	......	1.25x3.18	5	1035	9½	......	DFS	N	2.50x1.18	3	2.87x1.81	2.87x2.06	acdg	Op	Op	654	19¾	33 13/16	30½	......	74
(h)	E	SA	HG	Al	......	1.25x3.18	4	1035	9½	......	DFS	N	2.50x1.18	3	2.87x1.81	2.87x2.06	acdg	......	....	654	19¾	33 13/16	30½	......	75
(h)	Op	SA	HG	CI	......	.859x2.50	4	1030	7	......	DFS	N	1.93x1.31	4	2.25x1.18	2.25x1.81	acdgt	Op	Op	505	26	27¼	36 13/16	4	76
(h)	Op	SA	HG	CI	......	.859x2.50	4	1030	7	......	DFS	Y	1.93x1.31	4	2.25x1.81	2.25x1.81	acdgt	Op	Op	515	26	27¼	36 13/16	4,3	77
(h)	Op	SA	HG	Al	......	.859x2.68	4	1030	7	......	DFS	N	1.93x1.31	4	2.25x1.18	2.25x1.81	acdgt	Op	Op	505	26	27¼	36 13/16	4	78
(h)	Op	SA	HG	Al	......	.859x2.68	4	1030	7	......	DFS	Y	1.93x1.31	4	2.25x1.18	2.25x1.81	acdgt	Op	Op	515	26	27¼	36 13/16	4,3	79

For abbreviations, see pages 182 and 183

For Directory of the Engine Manufacturers listed above, see Table of Contents

1959 GASOLINE ENGINES FOR TRUCK, BUS,

Line Number	Engine Make and Model	Designed for	Number of Cylinders, Bore and Stroke (In.)	Maximum Brake Hp. at Specified R.P.M.: With Bare Engine	Maximum Brake Hp. at Specified R.P.M.: With Standard Accessories	Piston Displacement (Cu. In.)	Compression Ratio	Maximum Torque at R.P.M. (Lb. Ft.) with or without Accessories	Cylinder Liners—Type	Crankcase—Upper Half Integral with Cylinders	Valves: Arrangement	Valves: Exhaust Head Material (S.A.E. No.)	Valves: Max. Head Diameter (In.): Intake	Valves: Max. Head Diameter (In.): Exhaust	Valves: Min. Port Diameter (In.): Intake	Valves: Min. Port Diameter (In.): Exhaust	Valves: Lift (In.): Intake	Valves: Lift (In.): Exhaust	Valves: Stem Diameter (In.): Intake	Valves: Stem Diameter (In.): Exhaust
	Continental—(Cont.)																			
1	F-226	Ind	6-3 7/16x4 3/8	73-2400		226.0		178-1200 (BE)	N	In	L	Op	1.51	1.32	1.37	1.18	.296	.296	.341	.338
2	F-6226	C,T,Tr	6-3 7/16x4 3/8	99-3500		226.0	6.70	180-1500 (BE)	N	In	L	Op	1.51	1.32	1.37	1.18	.296	.281	.341	.338
3	M-271	Ind	6-3 5/8x4 3/8	86.2-2400		271.0		206-1000 (BE)	N	In	L	Op	1.76	1.51	1.62	1.37	.343	.350	.403	.401
4	M-6271	T,B,Tr	6-3 5/8x4 3/8	97-3000		271.0	6.70	209-1400 (BE)	N	In	L	Op	1.76	1.51	1.62	1.37	.343	.359	.404	.402
5	M-290	Ind	6-3 3/4x4 3/8	92.2-2400		290.0		221-1000 (BE)	N	In	L	Op	1.76	1.51	1.62	1.37	.343	.359	.404	.401
6	M-6290	T,B,Tr	6-3 3/4x4 3/8	108-3000		290.0	6.70	226-1400 (BE)	N	In	L	Op	1.76	1.51	1.62	1.37	.343	.359	.404	.402
7	M-330	Ind	6-4x4 3/8	104.4-2400		330.0		251-1100 (BE)	N	In	L	Op	1.76	1.51	1.62	1.37	.343	.343	.404	.402
8	M-6330	T,B,Tr	6-4x4 3/8	125-3000		330.0	6.70	258-1400 (BE)	N	In	L	Op	1.76	1.51	1.62	1.37	.343	.359	.404	.402
9	B-371	Ind	6-4 1/8x4 5/8	110-2400		371.0	6.60	280-1000 (BE)	N	In	L	Op	1.89	1.64	1.75	1.50	.359	.359	.435	.432
10	B-6371	T,B	6-4 1/8x4 5/8	123.5-3000		371.0	6.50	285-1200 (BE)	N	In	L	Op	1.89	1.64	1.75	1.50	.359	.359	.435	.432
11	T-6371	T	6-4 1/8x4 5/8	144-3000		371.0	6.40	297-1400 (BE)	N	In	I	Op	2.08	1.64	1.87	1.50	.460	.406	.437	.432
12	T-371	Ind	6-4 1/8x4 5/8	119-2400		371.0	6.36	286-1200 (BE)	N	In	I	Op	2.08	1.64	1.87	1.50	.460	.406	.437	.432
13	T-427	Ind	6-4 5/16x4 7/8	140-2400		427.0	6.36	335-1000 (BE)	N	In	I	Op	2.08	1.64	1.87	1.50	.460	.406	.437	.432
14	B-427	Ind	6-4 5/16x4 7/8	127-2400		427.0	6.60	322-1000 (BE)	N	In	L	Op	1.89	1.64	1.75	1.50	.359	.359	.435	.437
15	B-6427	T,B,M	6-4 5/16x4 7/8	142-3000		427.0	6.50	327-1200 (BE)	N	In	L	Op	1.89	1.64	1.75	1.50	.359	.359	.435	.432
16	T-6427	T	6-4 5/16x4 7/8	170-3000		427.0	6.40	350-1300 (BE)	N	In	I	Op	2.08	1.64	1.87	1.50	.460	.406	.437	.432
17	U-501	Ind	6-4 1/2x5 1/4	160-2400		501.0		384-1200 (BE)	N	In	I	Op	2.14	1.87	2.00	1.63	.374	.374	.435	.432
18	U-6501	T,B,Ind	6-4 1/2x5 1/4	186-2600		501.0	6.20	414-1200 (BE)	N	In	I	Op	2.14	1.87	2.00	1.63	.374	.374	.435	.432
19	R-513	Ind	6-4 1/2x5 3/8	164.3-2400		513.0	5.95	392-1400 (BE)	N	In	I	Op	2.14	1.89	2.00	1.75	.500	.500	.500	.493
20	R-6513	T,B	6-4 1/2x5 3/8	192-2800		513.0	6.00	410-1200 (BE)	N	In	I	Op	2.14	1.89	1.81	1.75	.500	.500	.500	.495
21	R-572	Ind	6-4 3/4x5 3/8	182.4-2400		572.0	5.97	437-1400 (BE)	N	In	I	Op	2.14	1.89	2.00	1.75	.500	.500	.500	.495
22	R-6572	T,B	6-4 3/4x5 3/8	220-2800		572.0	6.00	464-1200 (BE)	N	In	I	Op	2.14	1.89	2.00	1.75	.500	.500	.500	.495
23	R-602	Ind	6-4 7/8x5 3/8	192-2400		602.0	6.00	460-1200 (BE)	N	In	I	Op	2.14	1.89	2.00	1.75	.500	.500	.500	.495
24	R-6602	T,B	6-4 7/8x5 3/8	232-2800		602.0	6.00	482-1200 (BE)	N	In	I	Op	2.14	1.89	2.00	1.75	.500	.500	.500	.495
25	S-749	Ind	6-5 3/8x5 1/2	217-2200		749.0		572-1000 (BE)	N	In	I	Op	2.39	2.14	2.25	2.00	.562	.562	.497	.495
26	S-6749	T	6-5 3/8x5 1/2	250-2800		749.0		575-1300 (BE)	N	In	I	Op	2.39	2.14	2.25	2.00	.562	.562	.497	.494
27	K-6271	T‡	6-3 5/8x4 3/8	115-3200		271.0	6.40	216-1400 (BE)	N	In	I	Op	1.99	1.64	1.78	1.56	.443	.406	.435	.432
28	K-6290	T	6-3 3/4x4 3/8	123-3200		290.0	6.40	232-1400 (BE)	N	In	I	Op	1.99	1.64	1.78	1.56	.443	.406	.435	.432
29	K-6330	T'	6-4x4 3/8	147-3200		330.0	6.40	274-2000 (BE)	N	In	I	Op	1.99	1.64	1.78	1.56	.443	.406	.435	.432
30	S-6820	T'	6-5 5/8x5 1/2	300-2800		820.0		629-1300 (BE)	N	In	I	Op	2.39	2.14	2.25	2.00	.562	.562	.497	.495
31	V-603	Ind	8-4 3/4x4 1/4	240-2800		603.0	7.00	500-1400 (BE)	N	In	I	Aus	2.41	2.02	2.25	1.88	.512	.505	.500	.500
32	V-6603	T,B	8-4 3/4x4 1/4	260-3200		603.0	7.00	500-1400 (BE)	N	In	I	Aus	2.41	2.02	2.25	1.88	.512	.505	.500	.500
33	S-820	Ind	6-5 5/8x5 1/2	237-2200		820.0		625-1000 (BE)	N	In	I	Op	2.39	2.14	2.25	2.00	.562	.562	.497	.495
34	H-277	Ind	4-4x5 1/2	66.4-1800		277.0	6.25	242-1000 (BE)	W	In	I	Op	1.64	1.45	1.50	1.31	.343	.343	.437	.437
35	M-363	Ind	6-4x4 13/16	129-2800		363.0	6.70	294-1400 (BE)	N	In	L	Op	1.76	1.51	1.62	1.37	.343	.343	.404	.402
36	M-6363	T,B	6-4x4 13/16	146-3000		363.0	6.70	304-1600 (BE)	N	In	L	Op	1.76	1.51	1.62	1.37	.343	.343	.404	.402
37	K-363	Ind	6-4x4 13/16	123-2400		363.0	6.50	295-1400 (BE)	N	In	I	Op	1.99	1.65	1.78	1.56	.466	.441	.435	.432
38	K-6363	T,B	6-4x4 13/16	162-3200		363.0	6.50	300-1800 (BE)	N	In	I	Op	1.99	1.65	1.78	1.56	.466	.441	.435	.432
39	FO-6226	C,T,B	6-3 7/16x4 3/8	143-4500		226.0	8.00	212-2000 (BE)	N	In	I	Op	1.78	1.43	1.63	1.31	.409	.409	.341	.339
40	Crusader Mark IV	M	8-3 7/8x3		140-3800	283.0	8.00	217-2800 (EA)	D	In	I	St	1.70	1.50					.344	.344
41	Mark V	M	8-3 7/8x3		170-4200	283.0	8.00	240-2600 (EA)	D	In	I	St	1.70	1.50					.344	.344
42	Mark VI	M	8-3 7/8x3		200-4400	283.0	8.00	274-2600 (EA)	D	In	I	St	1.70	1.50					.344	.344
43	Mark VII	M	8-3 7/8x3		225-4600	283.0	9.50	298-2800 (EA)	D	In	I	St	1.70	1.50					.344	.344
44	Mark VIII	M	8-4 1/8x3 1/4		240-4400	348.0	8.00	320-2600 (EA)	D	In	I	St	1.94	1.66			.398	.398	.370	.370
45	Mark IX	M	8-4 1/8x3 1/4		275-4600	348.0	9.50	345-2800 (EA)	D	In	I	St	1.94	1.66			.398	.398	.370	.370
46	Mark X	M	8-4 1/8x3 1/4		250-4400	348.0	8.00		D	In	I	St	1.94	1.66			.398	.398	.370	.370
47	Mark XI	M	8-4 1/8x3 1/4		285-4800	348.0	9.50	350-2800 (EA)	D	In	I	St	1.94	1.66			.398	.398	.370	.370
48	Mark XII	M	8-4 1/8x3 1/4		300-4800	348.0	11.00		D	In	I	St	1.94	1.66			.398	.398	.370	.370
49	Dodge W300M	T	6-3 1/4x4 5/8	113-3600	102-3600	230.2	7.90	198-1600	N	In	L	Sil	1.53	1.41			.379	.379	.341	.341
50	D100, D200, D300, P300 P400, W100, W200	T	6-3 1/4x4 5/8	120-3600	109-3600	230.2	7.90	202-1600	N	In	L	Sil	1.53	1.41			.379	.379	.341	.341
51	D400, S400, D500, S500, W300	T	6-3 7/16x4 1/2	125-3600	115-3600	250.6	7.10	216-1600	N	In	L	Sil	1.72	1.50			.379	.379	.341	.340
52	D600, S600, W500	T	6-3 7/16x4 3/4	130-3600	120-3600	265.4	7.10	228-1600	N	In	L	Sil(y)	1.72	1.50			.379	.379	.341	.434
53	D100, D200, D300, P300 P400, W100, W200	T	8-3 5/8x3 13/16	205-4400	168-4400	318.1	8.25	290-2400	N	In	I	Sil	1.84	1.47			.380	.380	.373	.372
54	D400, S400, D500, S500 W300, W500	T	8-3 5/8x3 13/16	207-4400	170-4400	318.1	8.25	292-2400	N	In	I	CNS	1.84	1.47			.381	.381	.373	.372
55	C500, D600, C600, S600	T	8-3 5/8x3 13/16	210-4400	175-4400	314.6	7.60	300-2400	N	In	I	Sil(y)	1.75	1.47			.259	.259	.373	.434
56	D700, C700, S700, T700	T	8-3 15/16x3 5/8	218-3900	190-3900	354.1	7.50	319-2400	N	In	I	Sil(y)	2.00	1.75			.259	.259	.373	.434
57	D800, T800	T	8-3 15/16x3 5/8	224-3900	200-3900	354.1	7.50	340-2000	N	In	I	Sil(y)	2.00	1.75			.259	.259	.373	.434
58	D900, T900	T	8-3 15/16x3 5/8	234-3900	211-3900	354.1	7.50	360-2400	N	In	I	Sil(y)	2.00	1.75			.259	.259	.373	.434
59	V-8	T	8-3 29/32x3 5/16	205-4400	168-4400	318.1	8.25	290-2400 (BE)	N	In	I	NS	1.84	1.56			.380	.380	.373	.372
60	Flagship 220	M	8-3 7/8x3	220-4800		283.0	7.80	270-3000 (BE)	N	In	I									
61	150	M	8-3 7/8x3	150-3600		283.0	7.30	255-3000 (BE)	N	In	I									
62	Ford EAE	Tr	4-3 7/16x3 19/32	41-2000	39-2000	134.0	6.60	110-1450 (BE)	D	In	I	Aus	1.65	1.51	1.46	1.26	.355	.337	.342	.341
63	EAF	Tr	4-3 29/32x3 19/32	54.8-2200	48-2200	172.0	6.75	149-1300 (BE)	D	In	I	Aus	1.65	1.51	1.46	1.26	.355	.337	.342	.341
64	EBR, EBS, EBT	T	6-3 5/8x3 19/32	139-4200	126-4000	223.0	8.10	205-2900 (BE)	N	In	I	Aus	1.78	1.51	1.64	1.37	.369	.369	.342	.340
65	ECS	T	8-3 5/8x3 21/32	196-3800	172-3600	302.0	7.60	299-2500 (BE)	N	In	I	CNS(x	1.93	1.51	1.79	1.30	.346	.377	.371	.435
66	ECT	T	8-3 13/16x3 21/32	212-3800	187-3600	332.0	7.60	328-2500 (BE)	N	In	I	CNS(x	1.93	1.51	1.79	1.30	.346	.377	.371	.434
67	EEH, EEJ	T	8-3 3/4x3 19/64	186-4000	158-4000	292.0	7.90	269-2700 (BE)	N	In	I	Aus	1.93	1.51	1.66	1.30	.359	.357	.342	.341
68	EEK	T	8-3 3/4x3 19/64	187-3800	160-3600	292.0	7.60	270-2900 (BE)	N	In	I	CNS(x	1.93	1.51	1.66	1.37	.359	.357	.342	.435
69	EDL	T	8-4 1/8x3 3/4	226-3800	190-3600	401.0	7.50	350-2300 (BE)	N	In	I	CNS(x	2.02	1.64	1.84	1.44	.414	.414	.435	.434
70	EDM	T	8-4 1/2x3 3/4	260-3600	224-3400	477.0	7.50	430-2300 (BE)	N	In	I	CNS(x	2.02	1.64	1.84	1.44	.414	.414	.435	.434
71	EDN	T	8-4 1/2x4 13/64	277-3400	246-3200	534.0	7.50	490-2300 (BE)	N	In	I	CNS(x	2.02	1.64	1.84	1.44	.414	.414	.435	.434
72	D	Ind	4-3.9x3.6	61-2800		172.0	7.50	147-1400 (BE)	D	In	I	Aus	1.65	1.52	1.46	1.26	.355	.337	.343	.342
73	E	Ind	4-3 7/16x3 19/32	48.5-2800		134.0	7.50	110-1400 (BE)	D	In	I	Aus	1.65	1.52	1.46	1.26	.355	.337	.343	.342
74	F	Ind	6-3 5/8x3 19/32	107-2800		223.0	8.30	203-2000 (BE)	N	In	I	Aus+	1.78	1.52	1.46	1.26	.369	.369	.342	.341
75	J	Ind	8-3 5/8x3 19/64	132-2800		272.0	8.30	250-2400 (BE)	N	In	I	Aus+	1.93	1.52			.400	.420	.342	.341
76	L	Ind	8-3 13/16x3 21/32	168-2800		332.0	7.60	320-2400 (BE)	N	In	I	CNSx+	2.01	1.52			.346	.374	.342	.435
77	Q	Ind	8-4 1/8x3 3/4	187-2800	170-2800	401.0	7.50	350-2000 (BE)	N	In	I	TCAx+	2.02	1.64	1.84	1.44	.414	.414	.435	.435
78	M	Ind	8-4 1/2x3 3/4	225-2800	208-2800	477.0	7.50	430-2000 (BE)	N	In	I	TCAx+	2.02	1.64	1.84	1.44	.414	.414	.435	.435
79	N	Ind	8-4 1/2x4 13/64	252-2800	234-2800	534.0	7.50	490-2000 (BE)	N	In	I	TCAx+	2.02	1.64	1.84	1.44	.414	.414	.435	.435
80	GMC 270	B	6-3 25/32x4	130-3600	121-3400	269.5	7.75	238-1650 (BE)	N	In	I	Sil	1.64	1.46	1.31	1.15	.395	.387	.341	3.40
81	270	T	6-3 25/32x4	140-3600	127-3400	269.5	7.75	246-1800 (BE)	N	In	I	Aus+	1.64	1.43	1.31	1.15	.395	.387	.341	3.40

For abbreviations, see pages 182 and 183

For Directory of the Engine Manufacturers listed above, see Table of Contents

TRACTOR, MARINE, OR INDUSTRIAL USE—*continued*

VALVES: Angle (Deg.)	VALVES: Seats: Inserts Used?	VALVES: Seats: Insert Material (S.A.E. No.)	Camshaft Drive—Type	PISTONS: Material	PISTONS: Weight with Pins, Rings, Bushings (Oz.)	PISTONS: Piston Pin—Diameter and Length (In.)	Number of Rings per Piston	CONNECTING RODS: Material	CONNECTING RODS: Center to Center Length (In.)	CONNECTING RODS: Weight with Bushing and Cap (Oz.)	CRANKSHAFT: Material	CRANKSHAFT: Counter Balance Used	CRANKSHAFT: Crank-Pin Diameter and Length (In.)	MAIN BEARINGS: Number	MAIN BEARINGS: Diameter and Length (In.): Front	MAIN BEARINGS: Diameter and Length (In.): Rear	Oil Pressure to—	CARBURETOR: Make	CARBURETOR: Size	Engines Weight without Carburetor or Ignition (Lb.)	OVERALL DIMENSIONS (In.): Width	OVERALL DIMENSIONS (In.): Height	OVERALL DIMENSIONS (In.): Length	Clutch Housing (S.A.E. Nos.)	Line Number
(h)	Op	SA	HG	Cl	......	.859x2.81	4	1030	7	......	DFS	Y	2.06x1.31	4	2.37x1.28	2.37x1.73	acdgt	Op	Op	510	26	27¼	36 11/16	4	1
(h)	Op	SA	HG	Al	......	.859x2.81	4	1030	7	......	DFS	Y	2.06x1.31	4	2.37x1.28	2.37x1.81	acdgt	Op	Op	515	26	27¼	36 11/16	4,3	2
(h)	E	......	HG	Al	......	1.10x3.06	5	1035	8⅝	......	DFS	Y	2.25x1.56	7	2.62x1.50	2.62x2.18	acdgt	Op	Op	720	25 15/16	29½	42	3	3
(h)	E	SA	HG	Al	......	1.10x3.06	5	1035	8⅝	......	DFS	Y	2.25x1.56	7	2.62x1.50	2.62x2.18	acdgt	Op	Op	755	25¾	29½	42	4,3	4
(h)	E	SA	HG	Al	......	1.10x3.18	5	1035	8⅝	......	DFS	Y	2.25x1.56	7	2.62x1.50	2.62x2.18	acdgt	Op	Op	720	25¾	29½	42	3	5
(h)	E	SA	HG	Al	......	1.10x3.18	5	1035	8⅝	......	DFS	Y	2.25x1.56	7	2.62x1.50	2.62x2.18	acdgt	Op	Op	755	25¾	29½	42	4,3	6
(h)	E	SA	HG	Al	......	1.10x3.43	5	1035	8⅝	......	DFS	Y	2.25x1.56	7	2.62x1.50	2.62x2.18	acdgt	Op	Op	720	25¾	29½	42	3	7
(h)	E	SA	HG	Al	......	1.10x3.43	5	1035	8⅝	......	DFS	Y	2.25x1.56	7	2.62x1.50	2.62x2.18	acdgt	Op	Op	755	25¾	29½	42	4,3	8
(h)	E	St	HG	Al	......	1.25x3.43	5	1035	8⅝	......	DFS	Y	2.50x1.69	7	2.87x1.65	2.87x2.62	acdgt	Op	Op	870	26	29¼	32 11/16	2	9
(h)	E	St	HG	Al	......	1.25x3.43	5	1035	8⅝	......	DFS	Y	2.50x1.69	7	2.87x1.65	2.87x2.71	acdgt	Op	Op	870	26	29¼	43 11/16	3,2	10
(n)	E	St	HG	Al	......	1.25x3.37	5	1035	8⅝	......	DFS‡	Y	2.50x1.69	7	2.87x1.65	2.87x2.71	acdg	Op	Op	1070	24½	31⅝	45 11/16	......	11
(n)	E	SA	HG	Al	......	1.25x3.37	5	1035	8⅝	......	DFS	Y	2.50x1.69	7	2.87x1.65	2.87x2.71	acdg	Op	Op	1070	24½	31⅝	45 11/16	......	12
(n)	E	SA	HG	Al	......	1.25x3.62	5	1035	8⅝	......	DFS	Y	2.50x1.69	7	2.87x1.65	2.87x2.71	acdg	Op	Op	1075	24½	31⅝	45 11/16	......	13
(h)	E	......	HG	Al	......	1.25x3.43	5	1035	8⅝	......	DFS	Y	2.50x1.69	7	2.87x1.65	2.87x2.62	acdfgt	Op	Op	875	26	29¼	43 11/16	2	14
(h)	E	St	HG	Al	......	1.25x3.43	5	1035	8⅝	......	DFS‡	Y	2.50x1.69	7	2.87x1.65	2.87x2.71	acdfgt	Op	Op	875	26	29¼	43 11/16	3,2	15
(n)	E	St	HG	Al	......	1.25x3.62	5	1035	8⅝	......	DFS‡	Y	2.50x1.69	7	2.87x1.65	2.87x2.71	acdg	Op	Op	1075	24½	31⅝	45 11/16	......	16
(h)	E	SA	HG	Al	......	1.50x3.72	5	1035	10½	......	DFS	Y	......	7	2.75x1.75	2.75x2.81	acfg	......	......	......	26½	37 11/16	47 7/32	2	17
(h)	E	St	HG	Al	......	1.50x3.72	5	1035	10½	......	DFS‡	Y	......	7	2.75x1.75	2.75x2.81	acfg	Op	Op	......	26½	37 11/16	47 7/32	2	18
(h)	E	......	HG	Al	......	1.50x3.72	5	1035	10½	......	DFS‡	Y	3.00x1.94	7	3.25x1.75	3.25x2.75	acdfgt	Op	Op	1550	......	......	......	1	19
(h)	E	St	HG	Al	......	1.50x3.72	5	1035	10½	......	DFS‡	Y	3.00x1.94	7	3.25x1.75	3.25x2.75	acefg	Op	Op	1525	......	......	......	2	20
(h)	E	......	HG	Al	......	1.50x3.72	5	1035	10½	......	DFS‡	Y	3.00x1.94	7	3.25x1.75	3.25x2.75	acdfgt	Op	Op	1550	......	......	......	1	21
(h)	E	St	HG	Al	......	1.50x3.72	5	1035	10½	......	DFS‡	Y	3.00x1.94	7	3.25x1.75	3.25x2.75	acdfg	Op	Op	1525	......	......	......	2	22
(h)	E	St	HG	Al	......	1.50x3.72	5	1035	10½	......	DFS‡	Y	3.00x1.94	7	3.25x1.75	3.25x2.75	acdfg	Op	Op	1550	......	......	......	1	23
(h)	E	St	HG	Al	......	1.50x3.72	5	1035	10½	......	DFS‡	Y	3.00x1.94	7	3.25x1.75	3.25x2.75	acdfgt	Op	Op	1525	......	......	......	2	24
(h)	E	St	HG	Al	......	1.75x4.53	5	8640	10½	......	DFS‡	Y	......	7	3.75x1.12	3.75x3.12	acdg	Op	Op	......	31 15/16	47 7/16	57 7/16	0	25
(h)	E	St	HG	Al	......	1.75x4.53	5	8640	10½	......	DFS‡	Y	......	7	3.75x1.87	3.75x3.12	acdg	Op	Op	1865	31 15/16	47 7/16	57 7/16	1	26
(n)	E	St	HG	Al	......	1.10x3.06	5	1035	8⅝	......	DFS‡	Y	2.25x1.56	7	2.62x1.50	2.62x2.18	acdfg	Op	Op	......	......	......	......	3	27
(n)	E	St	HG	Al	......	1.10x3.18	5	1035	8⅝	......	DFS‡	Y	2.25x1.56	7	2.62x1.50	2.62x2.18	acdfg	Op	Op	......	......	......	......	3	28
(n)	E	St	HG	Al	......	1.10x3.43	5	1035	8⅝	......	DFS‡	Y	2.25x1.56	7	2.62x1.50	2.62x2.18	acdfg	Op	Op	......	......	......	......	3	29
(h)	E	St	HG	Al	......	1.75x4.53	5	8640	10½	......	DFS‡	Y	......	7	3.75x1.87	3.75x3.12	acdg	Op	Op	......	......	......	......	......	30
(h)	E	AS	HG	Al	......	1.50x3.97	4	8637	8⅝	46.8	1046	......	3.13x3.13	5	3.50x1.63	3.50x2.75	abcdfg	......	1¾	......	......	......	......	2	31
(h)	E	AS	HG	Al	......	1.50x3.97	4	8637	8⅝	46.8	1046	......	3.13x3.13	5	3.50x1.63	3.50x2.75	abcdfg	......	1¾	1780	32 11/16	33 7/16	44 7/32	2	32
(h)	E	St	HG	Al	......	1.75x4.53	5	8640	10½	......	DFS‡	......	......	7	3.75x1.87	3.75x3.12	abcdfg	Op	......	......	......	......	......	......	33
(h)	E	SA	HG	Al	......	1.25x3.18	4	1035	9½	......	DFS	......	2.50x1.18	3	2.87x1.81	2.87x2.06	acdfg	Op	......	860	19¾	33 11/16	30½	3	34
(h)	E	SA	HG	Al	......	1.10x3.43	5	1035	8⅝	......	1046	......	2.25x1.56	7	2.62x1.50	2.62x2.18	acdg	Op	......	850	25¾	29½	42	3	35
(h)	E	SA	HG	Al	......	1.10x3.43	5	1035	8⅝	......	1046	......	2.25x1.56	7	2.62x1.50	2.62x2.18	acdg	Op	......	840	25¾	29½	42	3	36
(h)	E	Ste°	HG	Al	......	1.11x3.43	5	1035	8⅝	......	1046	......	2.25x1.56	7	2.81x1.36	2.81x1.94	acdfg	Op	......	970	24½	34	40 11/16	3	37
(h)	E	Ste°	HG	Al	......	1.11x3.43	5	1035	8⅝	......	1046	......	2.25x1.56	7	2.81x1.36	2.81x1.94	acf	Op	......	960	24½	34	40 11/16	3	38
(h)	E	SA	Ch	Ala	......	.859x......	4	1030	7	......	1046	......	2.06x1.31	4	2.38x1.28	2.38x1.64	acdf	Op	Op	......	......	......	......	......	39
45	N	......	Ch	Alst	......	.927x......	4	DFS	......	......	......	......	......	5	2.30x......	2.30x......	acdf	Car	......	690*	26½	23 3/32	41¼	......	40
45	N	......	Ch	Alst	......	.927x......	4	DFS	......	......	......	......	......	5	2.30x......	2.30x......	acdf	Car	......	690	26½	23 3/32	43 1/16	......	41
45	N	......	Ch	Alst	......	.927x......	4	DFS	......	......	......	......	......	5	2.30x......	2.30x......	acdf	Car	......	690	26½	25⅜	41¼	......	42
45	N	......	Ch	Alst	......	.927x......	4	DFS	......	......	......	......	......	5	2.30x......	2.30x......	acdf	Car	......	690	26½	25⅜	41¼	......	43
45	N	......	Ch	Alst	......	.987x......	3	......	6⅛	......	......	......	......	5	2.50x1.20	2.50x1.82	acdf	Car	......	890*	32⅞	25⅞	44	......	44
45	N	......	Ch	Alst	......	.987x......	3	......	......	......	......	......	......	5	2.50x1.20	2.50x1.82	acdf	Car	......	890	32⅞	25⅞	44	......	45
45	N	......	Ch	Alst	......	.987x......	3	......	......	......	......	......	......	5	2.50x1.20	2.50x1.82	acdf	Sim	......	890	32⅞	25⅞	44	......	46
45	N	......	Ch	Alst	......	.987x......	3	......	......	......	......	......	......	5	2.50x1.20	2.50x1.82	acdf	Sim	......	890*	32⅞	22⅜	45⅞	......	47
45	N	......	Ch	Alst	......	.987x......	3	......	......	......	......	......	......	5	2.50x1.20	2.50x1.82	acdf	Sim	......	890*	32⅞	22⅜	45⅞	......	48
45	E	SA	Ch	Al	15.7°°	.859x2.75	4	MS	7 11/16	......	CS	......	2.08x1.00	4	2.50x1.17	2.50x1.59	acdg	BB	1 11/16	......	......	......	......	......	49
45	E	SA	Ch	Al	15.7°°	.859x2.75	4	MS	7 11/16	......	CS	......	2.08x1.00	4	2.50x1.17	2.50x1.59	acdg	BB	1 11/16	......	......	......	......	......	50
45	E	SA	Ch	Al	19.1°°	.859x2.87	3	MS	7⅞	......	CS	......	2.12x1.08	4	2.50x1.55	2.50x1.59	acdg	BB	1 11/16	......	......	......	......	......	51
45	E	SA	Ch	Al	19.1°°	.859x2.87	3	MS	7¾	......	CS(q)	......	2.12x1.08	4	2.50x1.55	2.50x1.59	acdg	BB	1 11/16	......	......	......	......	......	52
45	N	......	Ch	Al	......	.984x3.00	3	MS	6⅝	......	CS	......	2.25x.842	5	2.50x.822	2.50x1.53	acdg	Str	1 7/16	......	......	......	......	......	53
45	N	......	Ch	Al	......	.984x3.00	3	MS	6⅛	......	CS(q)	......	2.25x.811	5	2.50x.852	2.50x1.53	acdfg	Str	1 7/16	......	......	......	......	......	54
45	E	Sil	Ch	Al	18.2°°	.922x3.06	3	MS	6⅝	......	CS(q)	......	2.25x.811	5	2.50x.852	2.50x1.53	acdfg	Str	1 7/16	......	......	......	......	......	55
45	E	Sil	Ch	Al	22.6°°	.984x3.14	3	MS	6⅝	......	CS(q)	......	2.25x.906	5	2.50x.875	2.50x1.59	acdfg	BB	1 11/16	......	......	......	......	......	56
45	E	Eat	G	Al	22.6°°	.984x3.14	3	MS	6⅝	......	CS(q)	......	2.25x.906	5	2.50x.875	2.50x1.59	acdfg	BB	1 11/16	......	......	......	......	......	57
45	E	Eat	G	Al	22.6°°	.984x3.14	3	MS	6⅝	......	CS(q)	......	2.25x.906	5	2.50x.875	2.50x1.59	acdfg	BB(2)	1 11/16	......	......	......	......	......	58
45	N	......	Ch	Alt	......	.984x3.00	3	HMS	6⅛	......	1046	......	2.25x.842	5	2.50x.852	2.50x1.542	acdfg	Str	1 7/16	......	......	......	......	......	59
......	......	......	Ch	Als	......	......	3	......	......	......	AS	......	......	5	......	......	acdf	‡‡	......	690	25¼	29	35	......	60
......	......	......	......	Als	......	......	3	......	......	......	AS	......	......	5	......	......	acdf	......	......	690	25¼	29	35	......	61
45	E	CA	HG	Alst	24.0	.912x2.84	3	1041	6¼	32.0	NI	......	2.30x1.25	3	2.50x1.50	2.50x1.65	acdf	MaS	⅞	489*	19 7/64	27 11/64	30 27/64	5	62
45	E	CA	HG	Alst	31.4	.912x3.17	3	1041	6¼	32.0	NI	......	2.30x1.25	3	2.50x1.50	2.50x1.65	acdf	MaS	1	489*	19 7/64	27 11/64	30 27/64	5	63
45	N	......	Ch	Alst	26.7	.912x3.02	3	1041	6¼	29.6	Al	......	2.30x1.25	4	2.50x1.10	2.50x1.35	acdf	Hol	......	418	25 5/16	32 27/64	33 13/32	......	64
45	E	TCA	HG	Alst	32.2	.912x3.02	4	1041	7 1/16	28.4	1046	......	2.25x1.88	5	2.62x.975	2.62x.975	acdf	Hol	......	641	31 7/64	31 11/16	31½	......	65
45	E	TCA	HG	Alst	32.5	.912x3.17	4	1041	7 1/16	28.4	1046	......	2.25x1.88	5	2.62x.975	2.62x.975	acdf	Hol	......	648	31 7/64	31 11/16	31½	......	66
45	N	......	Ch	Alst	25.0	.912x3.02	3	1041	6 21/32	24.3	......	......	2.19x1.76	5	2.50x.907	2.50x.907	acdf	Hol	......	553	......	......	......	......	67
45	E	TCA	Ch	Alst	25.0	.912x3.02	3	1041	6 21/32	24.3	......	......	2.19x1.76	5	2.50x.907	2.50x.907	acdf	Hol	......	553	......	......	......	......	68
45	Bo	TCA	HG	Alst	51.7	1.22x3.34	4	4137	7¾	40.8	5046	......	2.75x2.03	5	3.13x1.10	3.13x1.10	acdf	Hol	......	963	......	......	......	......	69
45	Bo	TCA	HG	Alst	57.1	1.22x3.85	4	4137	7¾	42.1	5046	......	2.75x2.03	5	3.13x1.10	3.13x1.10	acdf	Hol	......	927	......	......	......	......	70
45	Bo	TCA	HG	Alst	56.3	1.22x3.85	4	4137	7¾	40.8	5046	......	2.75x2.03	5	3.13x1.10	3.13x1.10	acdf	Hol	......	941	......	......	......	......	71
45	E	TCA	Ch	Alst	25	.912x2.98	3	MS	6 21/32	24	Al	......	2.19x1.76	5	2.50x1.17	2.50x1.22	acdfg	MaS	1	606	28 27/64	30⅛	31⅛	3,4	72
45	E	TCA	Ch	Alst	26	.912x3.03	3	MS	6 17/32	30.5	Al	......	2.30x1.25	4	2.50x1.30	2.50x1.64	acdfg	MaS	1¼	507	23 15/16	29 27/32	36 13/16	3,4	73
45	E	TCA	Ch	Alst	19.2°°	.912x3.02	3	SF	6¼	29.6	Al	......	2.30x1.25	4	2.50x.923	2.50x.923	acdfg	Hol	1¼	507	28 27/64	31 27/32	31½	3,4	74
45	E	TCA	Ch	Alst	18.7°°	.912x3.02	3	SF	6 21/32	24.1	Al	......	2.19x1.76	5	2.50x.728	2.50x.728	acdf	Hol	1¼	610	28 11/16	32 27/32	32⅞	3,4	75
45	Bo	TCA	HG	Alst	22.9°°	.912x3.17	4	SF	6¼	28.4	Al	......	2.25x1.88	5	2.62x.723	2.62x.723	acdf	Hol	1 11/32	753	31½	34 27/64	33 29/32	2,3	76
45	Bo	TCA	HG	Als	51.6	1.22x3.34	4	1041	7¾	41.0	5046	......	2.75x2.03	5	3.13x1.10	3.13x1.10	abcdefg	Hol	1⅝	1029*	30 13/16	37 3/16	35 27/64	1,2	77
45	Bo	TCA	HG	Als	56.5	1.22x3.85	4	1041	7¾	41.0	5046	......	2.75x2.03	5	3.13x1.10	3.13x1.10	abcdefg	Hol	1⅝	1032*	30 13/16	37 3/16	35 27/64	1,2	78
45	Bo	TCA	HG	Als	56.5	1.22x3.85	4	1041	7¾	41.0	5046	......	2.75x2.03	5	3.13x1.10	3.13x1.10	abcdefg	Hol	1⅝	1032*	30 13/16	37 3/16	35 27/64	1,2	79
30	N	......	HG	Alt	41	1.05x3.25	4	1141	7	34	1046	Y	2.31x1.44	4	2.69x1.25	2.78x1.53	abcdfg	Zen	1⅜	......	26¼	35	41	......	80
30	N	......	HG	Alt	41.0	1.05x3.25	4	1141	7	35.0	1046	Y	2.31x1.44	4	2.69x1.25	2.78x1.53	abcdefg	Zen	1½	......	26¼	35	41	......	81

For abbreviations, see pages 182 and 183

For Directory of the Engine Manufacturers listed above, see Table of Contents

1959 GASOLINE ENGINES FOR TRUCK, BUS,

Line Number	Engine Make and Model	Designed for	Number of Cylinders, Bore and Stroke (In.)	Maximum Brake Hp. at Specified R.P.M.: With Bare Engine	Maximum Brake Hp. at Specified R.P.M.: With Standard Accessories	Piston Displacement (Cu. In.)	Compression Ratio	Maximum Torque at R.P.M. (Lb. Ft.) with or without Accessories	Cylinder Liners—Type	Crankcase—Upper Half Integral with Cylinders	Arrangement	Exhaust Head Material (S.A.E. No.)	Valves: Max. Head Diameter (In.) Intake	Valves: Max. Head Diameter (In.) Exhaust	Valves: Min. Port Diameter (In.) Intake	Valves: Min. Port Diameter (In.) Exhaust	Valves: Lift (In.) Intake	Valves: Lift (In.) Exhaust	Valves: Stem Diameter (In.) Intake	Valves: Stem Diameter (In.) Exhaust
	GMC—Cont'd																			
1	302	T	6-4x4	160-3800	141-3400	301.6	7.50	268-1800 (BE)	N	In	I	Aus*	1.86	1.56	1.56	1.18	.395	.387	.341	.340
2	336	T	8-3 11/16x3 15/16	200-4400	171-3600	336.9	7.50	307-2200 (BE)	N	In	I	Aus*	1.88	1.60	.....	.....	.373	.373	.344	.344
3	370	T	8-4x3 11/16	232-4200	199-3600	370.7	7.65	355-2600 (BE)	N	In	I	Aus*	1.75	1.56	.....	.....	.435	.435	.344	.391
4	503	T	6-4 9/16x5⅛	217-3000	185-2600	502.7	6.50	455-1600 (BE)	N	Se	I	Sil(x)*	2.09	1.69	1.75	1.50	.460	.460	.372	.434
5	Gray Marine Seascout 4-91	M	4-2⅞x3½	.....	25-2000	91.0	7.45	.....	N	In	L	Sil	1.20	1.02	1.06	.875	.284	.284	.314	.313
6	Four-112	M	4-3 3/16x3½	.....	31-2000	112.0	6.00	.....	N	In	L	Sil	1.20	1.02	1.06	.800	.284	.284	.313	.313
7	Four-162	M	4-3 7/16x4⅜	.....	63-3000	162.0	6.50	.....	N	In	L	Sil	1.51	1.33	1.37	1.18	.331	.331	.340	.381
8	Four-45	M	4-2⅞x3½	.....	45-3600	91.0	7.45	.....	N	In	L	Sil	1.20	1.02	1.06	.875	.284	.284	.314	.314
9	Four-75	M	4-3 7/16x4⅜	.....	75-3600	162.0	8.00	.....	N	In	L	Sil	1.64	1.45	1.37	1.18	.331	.331	.340	.313
10	Four-85	M	4-3 7/16x4⅜	.....	85-4000	162.0	8.00	.....	N	In	L	Sil	1.64	1.45	1.37	1.18	.331	.331	.340	.313
11	Fireball 4-90	M	4-3 7/16x4⅜	.....	90-4000	162.0	8.00	.....	N	In	L	Sil	1.64	1.45	1.16	1.07	.331	.331	.340	.318
12	Model 620	M	4-3 3/16x4⅜	.....	60-3200	140.0	7.05	96-2400 (EA)	N	In	L	Sil	1.51	1.33	1.37	1.18	.331	.331	.341	.339
13	Model 70	M	4-3 7/16x4⅜	.....	70-3400	162.0	8.00	125-2200 (EA)	N	In	L	Sil	1.64	1.45	1.37	1.18	.331	.331	.340	.313
14	Model 109	M	6-3 5/16x4⅜	.....	109-3400	226.0	8.00	.....	N	In	L	Sil	1.51	1.33	1.37	1.18	.311	.311	.340	.339
15	Model 116	M	6-3 5/16x4⅜	.....	116-3600	226.0	8.00	1595-2800 (EA)	N	In	L	Sil	1.51	1.33	1.37	1.18	.348	.332	.340	.339
16	Model 118	M	6-3 5/16x4⅜	.....	118-3600	226.0	8.00	.....	N	In	L	Sil	1.51	1.33	1.37	1.18	.311	.311	.340	.339
17	Model 120	M	6-3 7/16x4⅜	.....	120-3600	244.0	8.00	186-2600 (EA)	N	In	L	Sil	1.70	1.42	1.56	1.31	.311	.311	.339	.343
18	Model 136	M	6-3 7/16x4⅜	.....	136-3600	244.0	8.00	216-2600 (EA)	N	In	L	Sil	1.70	1.42	1.56	1.31	.311	.311	.339	.343
19	Model 150	M	6-4x4⅜	.....	150-3400	330.0	7.75	.....	N	In	L	Sil(x)	1.89	1.58	1.62	1.37	.354	.354	.403	.401
20	Model 165	M	6-4x4 13/16	.....	165-3400	363.0	8.00	288-1400 (EA)	N	In	L	Sil	1.89	1.59	1.62	1.37	.354	.354	.404	.431
21	Model 175	M	6-4x4 13/16	.....	175-3400	363.0	8.00	316-1400 (EA)	N	In	L	Sil	1.89	1.59	1.62	1.37	.354	.354	.404	.431
22	Model 185	M	6-4 5/16x4⅞	.....	185-3400	427.0	7.20	352-1200 (EA)	N	In	L	Sil	2.16	1.77	2.02	1.63	.359	.359	.434	.431
23	Model 200	M	6-4 5/16x4⅞	.....	200-3400	427.0	7.20	368-1200 (EA)	N	In	L	Sil	2.16	1.77	2.02	1.63	.359	.359	.434	.431
24	V-8 170	M	8-3½x3¼	.....	170-4400	250.0	8.40	230-2600 (EA)	N	In	I	21-4N	1.79	1.41	1.59	1.25	.375	.375	.372	.372
25	V-8 225	M	8-4x3¼	.....	225-4400	327.0	9.50	343-2700 (EA)	N	In	I	21-4N	1.79	1.41	1.59	1.25	.375	.375	.372	.372
26	V-8 135	M	8-3½x3¼	.....	135-4000	250.0	8.40	230-2600 (EA)	N	In	I	21-4N	1.79	1.41	1.59	1.25	.375	.375	.372	.372
27	Hercules ZXB	T,Tr,M,Ind	4-2⅝x3	21-2800	18-2800	65.0	6.30	40-1800 (BE)	N	In	L	Aus	1.30	1.05	1.12	.875	.200	.200	.248	.248
28	IXB	T,Tr,M,Ind	4-3¼x4	46-3200	39-3200	133.0	6.50	92-1800 (BE)	N	In	L	Aus	1.48	1.35	1.25	1.12	.250	.250	.310	.310
29	IXLB	T,Tr,M,Ind	4-3¼x4¼	49-3200	42-3200	141.0	6.50	97-1800 (BE)	N	In	L	Aus	1.48	1.35	1.25	1.12	.250	.250	.310	.310
30	GO-198	Tr,M,Ind	4-3¾x4½	76-3200	68.5-3200	198.0	6.50	159-1400 (BE)	D	...	I	2112	1.69	1.50	1.44	1.25	.369	.369	.375	.375
31	GO-226	Tr,M,Ind	4-4x4½	87-3200	78.5-3200	226.0	6.50	182-1400 (BE)	N	In	I	2112	1.69	1.50	1.44	1.25	.369	.369	.375	.375
32	QXLD	T,B,Tr,M,Ind	6-3 7/16x4¼	92-3200	77-3200	236.7	6.50	190-1400 (BE)	N	In	L	2112N	1.64	1.64	1.50	1.25	.311	.311	.310	.310
33	JXC	T,B,Tr,M,Ind	6-3¾x4¼	103-3200	87.5-3200	282.0	6.50	207-1400 (BE)	N	In	L	2112N	1.68	1.56	1.50	1.37	.356	.356	.373	.373
34	GO-298	Tr,M,Ind	6-3¾x4½	115-3200	104-3200	298.0	6.50	240-1400 (BE)	D	In	I	2112	1.69	1.50	1.44	1.25	.369	.369	.375	.375
35	JXD	T,B,Tr,M,Ind	6-4x4¼	113-3000	96-3000	320.0	6.50	240-1200 (BE)	N	In	L	2112N	1.68	1.56	1.50	1.37	.356	.356	.373	.373
36	JXLD	T,B,Tr,M,Ind	6-4x4½	131-3200	111-3200	339.0	6.50	272-1400 (BE)	N	In	L	2112N	1.83	1.67	1.72	1.50	.356	.356	.373	.373
37	GO-339	Tr,M,Ind	6-4x4½	131-3200	118-3200	339.0	6.50	272-1400 (BE)	...	...	I	2112	1.69	1.50	1.44	1.25	.369	.369	.375	.375
38	WXLC-3	T,B,Tr,M,Ind	6-4¼x4¾	139-2600	118-2600	404.0	6.50	312-1300 (BE)	N	In	L	2112	1.92	1.78	1.75	1.62	.388	.388	.373	.373
39	RXC	T,B,Tr,M,Ind	6-4⅝x5¼	143-2400	121-2400	529.0	6.30	372-1100 (BE)	N	In	L	2112N	2.00	2.00	1.75	1.75	.388	.388	.373	.373
40	HXE	T,B,Tr,M,Ind	6-5¾x6	227-2000	193-2000	935.0	6.20	750- 900 (BE)	N	Se	L	2112	2.44	2.31	2.18	2.00	.468	.468	.498	.498
41	GO-149	Tr,M,Ind	3-3¾x4½	45-2400	40.5-2400	149.0	6.50	114-1400 (BE)	N	In	I	2112	1.69	1.50	1.44	1.25	.369	.369	.375	.375
42	GO-169	Tr,M,Ind	3-4x4½	51-2400	46-2400	169.0	6.50	130-1400 (BE)	N	In	I	2112	1.69	1.50	1.44	1.25	.369	.369	.375	.375
43	C2-90D	GP	2-4x3½	35-3000	30-3000	88.0	.....	70-1900	N	.....	.....	.....	1.65	1.29	1.38	1.13	.406	.406	.342	.342
44	CV4-180	GP	4-4x3½	71-3000	60-3000	176.0	.....	137-2200	N	.....	.....	.....	1.65	1.29	1.38	1.13	.406	.406	.342	.342
45	Hercules-Hall-Scott 2269-O	Ind	12-5¾x7	575-2100	490-2100	2181.0	6.50	1750-1200 (BE)	N	Se	I	2112	2.87	2.75	2.62	2.50	.482	.482	.497	.528
46	590-GV-3, 590-GV-4	B,T,Ind	6-5x5	242-2800	205-2800	590.0	6.60	492-1600 (BE)	N	Se	I	2112	2.37	2.37	2.14	2.14	.500	.500	.496	.496
47	*590-BV-1	B,T,Ind	6-5x5	255-2800	217-2800	590.0	9.00	530-1600 (BE)	N	Se	I	2112	2.37	2.37	2.14	2.14	.500	.500	.496	.496
48	590-GH-1	B,T,Ind	6-5x5	242-2800	205-2800	590.0	6.60	492-1600 (BE)	N	Se	I	2112	2.37	2.37	2.14	2.14	.500	.500	.496	.496
49	*590-BH-1	B,T,Ind	6-5x5	255-2800	217-2800	590.0	9.90	530-1600 (BE)	N	Se	I	2112	2.37	2.37	2.14	2.14	.500	.500	.496	.496
50	590-O	Ind	6-5x5	240-2800	204-2800	590.0	8.70	515-1600 (BE)	N	Se	I	2112	2.38	2.38	2.16	2.19	.500	.500	.497	.496
51	6156-G2	T	6-5¾x6	300-2400	255-2400	935.0	6.40	800-1200 (BE)	N	Se	I	2112	2.63	2.38	2.38	2.02	.547	.547	.496	.527
52	6156-B1	T	6-5¾x6	340-2400	289-2400	935.0	8.10	920-1200 (BE)	N	Se	I	2112	2.63	2.38	2.38	2.02	.547	.547	.496	.527
53	6182-G2	T,Ind	6-5¾x7	320-2300	275-2300	1091.0	6.50	950-1200 (BE)	N	Se	I	2112	2.63	2.38	2.38	2.02	.547	.547	.496	.527
54	6182-B1	T,Ind	6-5¾x7	368-2300	313-2300	1091.0	8.10	1080-1200 (BE)	N	Se	I	2112	2.63	2.38	2.38	2.02	.547	.547	.496	.527
55	779	B	6-5¼x6	263-2400	223-2400	779.0	6.00	670-1600 (BE)	W	In	I	2112	2.63	2.38	2.38	2.02	.482	.482	.497	.528
56	Interceptor 135	M	8-3½x3 5/16	.....	135-4000	256.0	7.60	198-2100 (EA)	N	In	I	Aus	1.93	1.51	1.66	1.30	.400	.420	.342	.341
57	150	M	8-3½x3 5/16	.....	150-4000	256.0	7.60	230-2400 (EA)	N	In	I	Aus	1.93	1.51	1.66	1.30	.400	.420	.342	.341
58	170	M	8-3⅝x3 5/16	.....	170-4000	272.0	8.30	220-3000 (EA)	N	In	I	Aus	1.93	1.51	1.66	1.30	.400	.420	.342	.341
59	185	M	8-3¾x3 5/16	.....	185-4000	292.0	8.80	272-2500 (EA)	N	In	I	Aus	1.93	1.51	1.66	1.30	.400	.420	.342	.341
60	215	M	8-3 13/16x3 7/16	.....	215-4000	312.0	8.90	290-2800 (EA)	N	In	I	Aus	1.93	1.51	1.66	1.30	.400	.420	.342	.341
61	260	M	8-4 1/16x3½	.....	260-4400	361.0	8.60	340-3000 (EA)	N	In	I	Aus	2.03	1.56	1.80	1.84	.408	.408	.372	.370
62	International UC-60	Tr,Ind	4-2 9/16x2⅞	17-2500	16.5-2500	59.5	7.00	39.5-1600 (BE)	N	In	L	CNS	1.10	.910	.980	.790	.222	.222	.310	.310
63	U-123	Tr,Ind	4-3¼x4	42-2000	40-2000	135.0	7.30	121-1180 (BE)	W	In	I	Sil	1.34	1.16	1.19	1.00	.261	.261	.341	.341
64	U-220	T,Ind	6-3 9/16x3 11/16	72-2400	66-2400	220.5	6.50	177-1200 (BE)	N	In	I	CNS	1.66	1.52	1.50	1.31	.397	.397	.372	.370
65	U-264-6	T,Ind	6-3 9/16x4 13/32	83-2400	78-2400	264.0	7.00	198-1400 (BE)	N	In	I	CNS	1.78	1.52	1.63	1.31	.240	.240	.372	.372
66	U-308	T,Ind	6-3 13/16x4½	92-2400	87.5-2400	308.0	6.50	230-1200 (BE)	N	In	I	Sil	1.81	1.61	1.50	1.44	.406	.406	.372	.372
67	U-372	T,Ind	6-4 5/16x4¼	110-2200	104-2200	372.1	6.50	288-1200 (BE)	D	In	I	Sil°	2.25	1.55	2.00	1.60	.449	.449	.434	.434
68	U-450	T,Ind	6-4⅝x4½	139-2200	126-2200	450.9	6.50	348-1350 (BE)	D	In	I	Sil°	2.25	1.55	2.00	1.60	.449	.449	.434	.434
69	U-1091	Ind	6-5¾x7	214-1600	200-1600	1090.6	7.50	835- 800 (BE)	D	In	I	CNS	2.53	2.09	2.31	1.88	.625	.625	.495	.494
70	U-501	T,Ind	6-4½x5¼	141-2200	131-2200	501.0	6.50	394-1200 (BE)	D	In	I	Sil	2.25	1.78	1.94	1.50	.450	.450	.435	.434
71	UV-401	T,B,Ind	8-4⅛x3¾	170-2800	160-2800	401.0	7.60	350-1900 (BE)	N	In	I	.....	2.16	1.81	1.94	1.63	Hyd	Hyd	.435	.434
72	UV-461	T,B,Ind	8-4⅛x4 5/16	179-2600	170-2600	461.0	7.20	378-1900 (BE)	N	In	I	.....	2.16	1.81	1.94	1.63	Hyd	Hyd	.435	.434
73	UV-549	T,B,Ind	8-4½x4 5/16	222-2600	208-2600	549.0	7.00	490-1800 (BE)	N	In	I	.....	2.16	1.81	1.94	1.63	Hyd	Hyd	.435	.434
74	UC-221	.....	6-	60-1800	59-1800	221.0	7.00	184-1200 (BE)	D	In	I	CNS	.....	.....	.....	.....	.....	.....	.....	.....
75	UC-263	Tr,Ind	6-	70-1800	68-1800	263.0	7.00	213- 900 (BE)	D	In	I	CNS	.....	.....	.....	.....	.....	.....	.....	.....
76	Lathrop BW-30	M	4-2½x3	30-4000	.....	58.0	7.10	39-2600	N	In	I		1.12	.998	1.06	.900	.255	.255	.310	.308
77	BW-60	M	4-3¼x4	60-3200	.....	133.0	7.20	105-2400	N	In	L	CNS	.....	.....	.....	.....	.....	.....	.312	.312
78	Atom Special	M	6-3¾x4¼	100-3000	.....	282.0	.....	.....	N	In	L	CNS	.....	.....	1.50	1.37	.....	.....	.....	.....
79	BW-130	M	6-4x4¼	130-3000	.....	320.0	7.20	246-2000	N	In	L	CNS	.....	.....	.....	.....	.....	.....	.....	.....
80	BW-155	M	6-4x4½	155-3400	.....	339.0	7.20	284-2000	N	In	L	CNS	.....	.....	.....	.....	.....	.....	.....	.....
81	Mystic 130	M	6-4¾x5½	130-1800	.....	585.0	.....	379- 900	N	In	L	CNS	2.25	2.25	2.00	2.00	.375	.375	.....	.....

For abbreviations, see pages 182 and 183

For Directory of the Engine Manufacturers listed above, see Table of Contents

TRACTOR, MARINE, OR INDUSTRIAL USE—*continued*

Valves: Angle (Deg.)	Valves: Seats: Inserts Used?	Valves: Seats: Insert Material (S.A.E. No.)	Camshaft Drive—Type	Pistons: Material	Pistons: Weight with Pins, Rings, Bushings (Oz.)	Pistons: Piston Pin—Diameter and Length (In.)	Number of Rings per Piston	Connecting Rods: Material	Connecting Rods: Center to Center Length (In.)	Connecting Rods: Weight with Bushing and Cap (Oz.)	Crankshaft: Material	Crankshaft: Counter Balance Used	Crankshaft: Crank-Pin Diameter and Length (In.)	Main Bearings: Number	Main Bearings: Diameter and Length (In.): Front	Main Bearings: Diameter and Length (In.): Rear	Oil Pressure to—	Carburetor: Make	Carburetor: Size	Engines Weight without Carburetor or Ignition (Lb.)	Overall Dimensions (In.): Width	Overall Dimensions (In.): Height	Overall Dimensions (In.): Length	Clutch Housing (S.A.E. Nos.)	Line Number
(h)	N		HG	Alst	43.0	1.05x3.50	4	1141	7	35.0	1046	Y	2.31x1.44	4	2.69x1.25	2.78x1.53	abcdefg	Ben	1 1/4		26	34	40 1/8		1
(h)	N		Ch	Alst		.980x3.13	3	1335	6 5/8		1045		2.25x2.00	5	2.63x.938	2.63x1.59	abcdefg	Ben♯	1 1/4						2
45	E	AS	Ch	Alst		.980x3.03	3	1335	6 5/8	30.0	1145	Y	2.25x2.00	5	2.75x.818	2.75x1.19	abcdefg	Hol‡‡	1 1/4						3
(h)	E	AS	HG	Alst		1.25x3.96	4	1340	10 3/4	67.0	5046	Y	2.62x1.75	7	3.00x2.19	3.00x2.19	abcdefg	Hol‡‡	1 1/2		39 5/8	41	49 3/4		4
(h)	N		HG	Al		.703x2.43	3	1030	5 3/4		1045	N	1.5x1.18	3	1.75x1.78	1.75x1.37	acdr	Zen	1	385	17 3/4	19 1/16	31		5
(h)	N		HG	Al		.708x2.75	3	1030	5 3/4		1045		1.50x1.00	3	1.75x1.43	1.75x1.21	acdr	Zen	1	400	17 3/4	19 1/16	31		6
(h)	N		HG	Al		.859x2.69	4	CS	7		1045	N	1.93x1.31	3	2.25x1.89	2.25x1.18	acdr	Zen	1 1/4	565	19 1/2	22 1/8	30		7
(h)	N		HG	Al		.703x2.43	3	CS	5 3/4		1045	N	1.51x1.18	3	1.75x1.78	1.75x1.37	acdr	Zen	1 1/4	390	17 3/4	19 1/16	31		8
(h)	N		HG	Al		.859x2.68	4	CS	7		1045	N	1.93x1.31	3	2.25x1.89	2.25x1.18	acdr	Zen	1 3/8	540	23 3/16	22 3/16	35		9
(h)	N		HG	Al		.859x2.68	4	CS	7		1045	N	1.93x1.31	3	2.25x1.69	2.25x1.18	acdr	Zen	1 3/8	540	23 3/16	22 3/16	35		10
(h)	N		HG	Al		.859x2.68	4	CS	7		1045	N	1.93x1.31	3	2.25x1.89	2.25x1.18	acdr	Zen	1 1/4	540	21 3/16	22 3/16	35		11
(k)	N		HG	Al	28	.859x2.68	4	1035	7	28	1045		1.94x1.31	3	2.25x1.89	2.25x1.31	acd	Car	1 1/4	525	19 1/2	21 5/16	34		12
(h)	N		HG	Al		.859x2.68	4	1035	7	28.0	1045		1.93x1.31	3	2.25x1.89	2.25x1.18	acd	Zen	1 3/8	545	19 1/2	21 5/16	34		13
(k)	N		HG	Al		.859x2.81	4	1030	7		1045		2.06x1.31	4	2.37x1.73	2.37x1.28	acdr	Zen	1 3/8	660	21 11/16	23 1/4	41		14
(k)	N		HG	Alt	32	.859x2.81	4	1035	7		1045		2.06x1.31	4	2.37x1.73	2.37x1.28	acd	Str	1 5/16	700	22	27	41		15
(k)	N		HG	Al		.859x2.81	4	CS	7		1045	Y	2.06x1.31	4	2.37x1.73	2.37x1.28	acdr	Zen	1 3/8	675	21 11/16	23 1/4	41		16
45	N		HG	Al		.859x2.87	4	1035	8 3/8		1045		2.12x1.37	4	2.37x2.06	2.37x1.43	acd	Zen	1 1/2	785	25 1/4	23 3/8	43 11/16		17
45	N		HG	Al		.859x2.87	4	1035	8 3/8		1045		2.12x1.37	4	2.37x2.06	2.37x1.43	acd	Zen	1 1/2	800	25 1/4	23 3/8	43		18
(k)	N		HG	Al		1.10x3.43	5	1035	8 3/8		1045		2.25x1.56	7	2.62x2.15	2.62x1.56	acdr	Zen	2	1050	24 5/8	25 1/4	49		19
(k)	N		HG	Alt		1.10x3.43	5	1035	8 3/8		1046		2.25x1.56	7	2.62x2.15	2.62x1.56	acd	Zen		1050*	24 5/8	25 1/4	46 1/2		20
(k)	N		HG	Alt		1.10x3.43	5	1035	8 3/8		1046		2.25x1.56	7	2.62x2.15	2.62x1.56	a	Zen		1070*	24 5/8	25 1/4	46 1/2		21
(k)	N		HG	Alt		1.25x3.63	5	1035	8 3/8		1045		2.50x1.65	7	2.87x2.71	2.87x1.65	a	Zen		1245*	28 1/16	27 9/16	51 9/16		22
(k)	N		HG	Alt		1.25x3.63	5	1035	8 3/8		1045		2.50x1.65	7	2.87x2.71	2.87x1.65	a	Zen		1250*	28 1/16	27 9/16	51 9/16		23
(h)	N		Ch	Alst	25.5	.931x3.19	3	1041	6 3/8	28.0	1046		2.25x2.00	5	2.50x1.27	2.50x.981	acdfg	Car	1 1/4	950	27 1/4	24 5/8	44 1/8		24
(h)	N		Ch	Alst	32.0	.931x3.19	3	1041	6 3/8	28♦	1046		2.25x2.00	5	2.50x1.27	2.50x.981	acdfg	Car	1 1/4	950	27 1/4	24 5/8	44 1/8		25
(h)	N		Ch	Alst	25.5	.931x3.19	3	1041	6 3/8	28.0	1046		2.25x2.00	5	2.50x1.27	2.50x.981	acdfg	Car	1 1/4	950	27 1/4	24 5/8	44 1/8		26
30	Op	Eat	HG	AC	21	.687x2.33	3	3140	5 1/8	15	4140	N	1.50x1.00	3	2.00x1.31	2.00x1.37	acg	Op	Op	179	16 1/2	16 1/4	23 9/16	5,6	27
30	Op	Eat	HG	AC	29.5	.750x2.81	3	3140	6 9/16	21	CS‡	Op	1.75x1.12	3	2.00x1.56	2.00x1.62	acg	Op	Op	293	17 3/4	19 3/4	26 7/16	4,5	28
30	Op	Eat	HG	Al	29.5	.75x2.81	3	3140	6 9/16	21	4140	N	1.75x1.12	3	2.00x1.56	2.00x1.62	acdg	Op	Op	293	17 3/4	19 3/4	26 7/16	4,5	29
45	N		HG	Alt	40.3	1.13x3.03	3	3140	8	43.5	1046		2.00x1.31	5	2.50x1.16	2.50x1.16	abcdefg	Op		500	22 1/8	33	31 15/16	2,3,4	30
45	N		HG	Alt	43.4	1.13x3.34	3	3140	8	43.5	1046		2.00x1.31	5	2.50x1.16	2.50x1.16	abcdefg	Op		500	22 1/8	33	31 15/16	2,3,4	31
30	Op	Eat	HG	Al	26	.875x2.92	4	1035	7	26	1046‡	Y	2.00x1.25	7	2.50x1.31	2.50x1.93	acg	Op	1 1/4	440	17 7/16	20 9/16	35 1/16	3,4,5	32
45	Op	Eat	HG	Al	37.5	1.00x3.26	4	3140	8	37	1046‡	Op	2.00x1.50	7	2.50x1.31	2.50x2.12	acg	Op	1 1/4	605	18 1/8	24 1/16	39	3,4,5	33
45	N		HG	Alt	40.3	1.13x3.03	3	3140	8	43.5	1046‖		2.00x1.31	7	2.50x1.16	2.50x1.16	abcdefg	Op		650	22 1/8	34 1/8	40 7/32	2,3,4	34
45	Op	Eat	HG	Al	40.5	1.00x3.51	4	3140	8	37	1046‡	Op	2.00x1.50	7	2.50x1.31	2.50x2.12	acg	Op	1 1/2	605	18 1/8	24 1/16	39	3,4,5	35
30	Op	Eat	HG	Al	44.5	1.12x3.44	4	3140	8	39.2	1046‡	Y	2.00x1.50	7	2.50x1.31	2.50x2.12	acg	Op	1 3/4	630	18 1/8	24 1/16	39	3,4,5	36
45	N		HG	Alt	43.4	1.13x3.34	3	3140	8	43.5	1046		2.00x1.31	7	2.50x1.16	2.50x1.16	abcdef	Op		650	22 1/8	34 1/8	40 7/32	2,3,4	37
30	Op	Eat	HG	Al	50	1.31x3.62	4	4140	8 7/8	50	1046‡	Y	2.25x1.50	7	2.62x1.75	2.62x2.75	acg	Op	1 3/4	825	26 1/32	28 7/32	42 9/16	2,3	38
45	Op	Eat	HG	Al	63	1.25x4.07	5	3140	9 3/8	78	1046‡	Op	2.62x2.00	7	3.00x1.93	3.00x2.93	acg	Op	1 3/4	1010	26 11/32	32 13/16	46 9/16	2,3	39
30	Op	Eat	HG	Al	126	1.50x5.06	4	3140	12	166	1046‡	Op	3.00x2.25	7	3.50x2.37	3.50x3.50	acg	Op	2 1/2	1830	29 7/16	40 15/16	55 7/16	00,0,1	40
45	N		HG	Alt	40.3	1.13x3.03	3	3140	8	43.5	1046		2.00x1.31	4	2.50x1.16	2.50x1.16	abcdefg	Op		475	22 5/16	32 1/4	26 15/16	2,3,4	41
45	N		HG	Alt	43.4	1.13x3.34	3	3140	8	43.5	1046		2.00x1.31	4	2.50x1.16	2.50x1.16	abcdefg	Op		475	22 5/16	32 1/4	26 15/16	2,3,4	42
45	Y	Ste	HG	Al	1.6	.848x3.43	3	1045	6 11/32	1.7	CA	Y	1.28x1.00	2	3.00x1.61	3.00x1.61	abcdef	Op		274	24 13/16	32 3/8	20 9/16		43
45	Y	Ste	HG	Al	1.6	.848x3.43	3	1045	6 11/32	1.7	CA	Y	1.28x1.00	3	2.62x1.12	2.62x2.00	abcdef	Op	1 1/2	463	28 7/8	30 7/8	22 5/8		44
30	E	4140°	HC	Al	128	1.37x4.94	6	3140	12	237.0	4140	Y	3.00x2.43	7	3.25x2.09	3.25x2.09	acdefgr	Zen(3)	2 1/2	3650*	45	47 1/4	88		45
45	E	4140°	Ch	Al	89	1.50x4.44	3	3135	9	93	4140	Y	3.00x2.09	7	3.24x1.67	3.25x2.38	acdefg	Hol	1 1/2	1130*	26 1/4	38 1/4	49 1/4	3	46
45	E	4140°	Ch	Al	89	1.50x4.44	3	3135	9	93	4140	Y	3.00x2.09	7	3.24x1.67	3.25x2.38	acdefg	Cen	2 1/2	1130*	26 1/4	38 1/4	49 1/4	2	47
45	E	4140°	Ch	Al	89	1.50x4.44	3	3135	9	93	4140	Y	3.00x2.09	7	3.24x1.67	3.25x2.38	acdefg	Hol	1 1/2	1210	54	23	50 1/2	2	48
45	E	4140°	Ch	Al	89	1.50x4.44	3	3135	9	93	4140	Y	3.00x2.09	7	3.24x1.67	3.25x2.38	acdefg	Cg	2 1/2	1210	54	23	50 1/2	2	49
45	E	4140	Ch	Al	89.0	1.50x4.44	3	3135	9	93.0	4140		3.00x2.09	7	3.25x1.67	3.25x2.38	acdefg	Alg	2 1/2	1130	26 1/4	38 1/4	51 1/4	1	50
(h)	E	4140	Ch	Al	145	1.62x4.93	4	3140	11 1/2	148	4140		3.24x2.06	7	3.50x2.10	3.50x3.05	acdefg	Hol	1 1/4	2150	30 1/8	48 5/8	60 1/2	1	51
(h)	E	4140	Ch	Al	145	1.62x4.93	4	3140	11 1/2	148	4140		3.24x2.06	7	3.50x2.10	3.50x3.05	acdefg	Cen	2 1/2	2150	30 1/8	48 5/8	60 1/2	1	52
(h)	E	4140	Ch	Al	141	1.62x4.93	4	3140	11 1/2	148	4140		3.24x2.06	7	3.50x2.10	3.50x3.05	acdefg	Hol	1 1/4	2150	30 1/8	48 5/8	60 1/2	1	53
(h)	E	4140	Ch	Al	141	1.62x4.93	4	3140	11 1/2	148	4140		3.24x2.06	7	3.50x2.10	3.50x3.05	acdfg	Cgn	2 1/2	2150	30 1/8	48 5/8	60 1/2	1	54
(h)	E	4140	Ch	Al	101.0	1.37x4.44	4	3135	11	104.0	4140		2.75x2.44	7	3.25x2.19	3.25x2.50	ac	Hol		1786	50 1/2	28 1/2	71 3/8	1,2	55
45	N		Ch	Alst	26.7	.912x3.02	3	SF	6 21/32	24.2	Al		2.19x1.76	5	2.50x.728	2.50x.728	acdf	Car	1 3/16	640*	27 3/16	24 7/8	36 11/16		56
45	N		Ch	Alst	26.7	.912x3.02	3	SF	6 21/32	24.2	Al		2.19x1.76	5	2.50x.728	2.50x.728	acdfg	Car	1 3/16	640*	27 3/16	24 7/8	36 11/16		57
45	N		Ch	Alst	26.7	.912x3.02	3	SF	6 21/32	24.2	Al		2.19x1.76	5	2.50x.728	2.50x.728	acdf	Car	1 3/16	640*	27 3/16	24 7/8	36 11/16		58
45	N		Ch	Alst	26.8	.912x3.02	3	SF	6 21/32	24.2	Al	Y	2.19x1.76	5	2.50x.907	2.50x.907	acdf	Car	1 3/16	640*	27 3/16	24 7/8	36 11/16		59
45	N		Ch	Alst	27.6	.912x3.02	3	SF	6 21/32	22.6	Al		2.19x1.76	5	2.62x.907	2.62x.907	acdfg	Car	1 3/16	640*	27 3/16	24 7/8	36 11/16		60
(h)	N		Ch	Alst	24°°	.975x3.16	3	SF	6 21/32	25.7	Al		2.44x1.76	5	2.75x.907	2.75x.907	acdg	Car		870*	29 11/16	32 13/16	44 1/4		61
45	N		HG	CI	20.0	.688x2.19	3	1035	5	15.4	1046‡	Y	1.50x.870	3	1.62x1.30	1.62x1.34	acdg	Own	3/4	279*	18 5/8	25 1/4	26 1/4	5	62
45	N		HG	Al	13.9°°	.919x2.49	3	1040	7 1/4	33.2	1046		1.75x1.56	3	2.13x1.59	2.13x1.85	acdfg	C-Z	7/8	525*	20 1/4	33 1/4	30 3/8	4	63
30	E	DC	HG	Al	33.0	.875x2.95	3	1037	6 11/16	40.6	1046	Y	2.38x1.16	4	2.75x1.69	2.75x2.17	abcdfg	Zen	1 1/4	810*	21 11/16	33 1/4	41 1/4	3	64
45	E	Sil	HG	Al	30.4	.875x2.95	3	SF	6 11/16	40.0	1046		2.38x....	4	2.75x1.30	2.75x1.89	abcdfg	Zen	1 1/4	975	28	50	51 1/4	3	65
30	E	DC	HG	Al	32.0	.875x2.95	3	SF	6 11/16	43.2	1046		2.13x....	4	2.70x1.13	2.70x1.94	abcdfg	Zen	1 1/2	1010	21 1/4	35 5/8	42 1/4	3	66
44	E	St	HG	Al	62.0	1.11x3.80	4	8632	9	61.0	1046‡	Y	2.75x1.38	7	3.25x1.86	3.25x2.37	abcdfg	Zen	1 1/2	1240*	25 5/8	37 1/2	47 3/4	1	67
44	E	St	HG	Al	57.0	1.11x3.80	4	8632	9	61.0	1046	Y	2.75x1.38	7	3.25x1.81	3.25x2.37	abcdfg	Zen	1 1/2	1250*	25 1/4	37 3/8	47 1/2	1	68
45	N	Sil	HG	Al	119.2	1.88x5.00	5	1040	13 1/4	253.5	1046	Y	3.63x2.38	7	4.13x1.75	4.13x1.75	abcdfg	Ens	2 1/2	3825*	32	55 1/8	71 1/4	0	69
45	E	Sil	HG	Al	57.6	1.11x3.80	3	SF	9	60.8	1046		2.75x....	7	3.25x1.34	3.25x1.84	abcdfg	Zen	1 1/2	1320	25 1/2	37 1/2	47 1/2	1	70
45	E	St	HG	Al	44.3	1.31x3.01	3	SF	8 7/8	51.9	1046		3.13x2.38	5	3.13x.969	3.13x.969	abcdfg	Hol♯		952	41 1/2	48 1/2	52 1/2	2	71
45	E	St	HG	Al	44.3	1.31x3.01	3	SF	8	51.0	1046		3.13x2.37	5	3.13x.969	3.13x.969	abcdfg	Hol♯		962	41 1/2	48 1/2	52 1/2	2	72
45	E	St	HG	Al	53.8	1.11x3.80	4	SF	8	51.0	1046		3.13x2.38	5	3.13x.969	3.13x.969	abcdfg	Hol‡‡	1 1/2	1002	41 1/4	48 1/2	52 1/2	2	73
45	E		HG	Al		.875x2.95	3	1040	7 1/4	42.6	1046		2.38x.968	4	2.75x1.21	2.75x1.81	abcdefg			870	23 1/2	41 1/2	30 1/2	3	74
45	E		HG	Al		.875x2.95	3	1040	7 1/4	42.6	1046		2.38x.968	4	2.75x1.21	2.75x1.81	abcdefg			870	23 1/2	41 1/2	30 1/2	3	75
45	N		Ch	Al		.625x2.13	3		5 3/4		CNS	Y	1.63x.880	3	2.00x1.13	2.00x1.13	acfg	Zen	1	295	18 1/2	24 11/16	32		76
30	N		HG	Al		.750x2.80	3	AS	6 7/16		CNS	N	1.87x2.75	3			acg	Zen	1 1/4	440	18 1/2	23	33 11/16		77
	N		HG	Al	40.0	1.00x3.50	4	DFS	8	36.0	CNS		2.00x1.50	7	2.50x1.31	2.50x2.12	abcdg	Zen	1 1/2	876					78
30			HG	Al		1.00x3.50	4	DFS	8	30.0	Spec		2.00x1.50	7	2.50x1.31	2.50x2.12	acg	Zen		820	23	25 3/4	47		79
			HG	Al	40.0	1.00x3.50	4	DFS	8	36.0	CNS	Y	2.00x1.50	7	2.50x1.31	2.50x2.12	abcdg	Zen		916	23	25 3/4	47		80
45	E		HG	CI	104.0	1.37x4.12	4	Dur	12 1/4	88.0	CNS	N	2.25x2.37	7	2.75x3.25	2.75x2.12	acdg	Hol		1700	24 1/2	27 3/4	68		81

For abbreviations, see pages 182 and 183

For Directory of the Engine Manufacturers listed above, see Table of Contents

1959 GASOLINE ENGINES FOR TRUCK, BUS,

Line Number	Engine Make and Model	Designed for	Number of Cylinders, Bore and Stroke (In.)	Maximum Brake Hp. at Specified R.P.M.: With Bare Engine	Maximum Brake Hp. at Specified R.P.M.: With Standard Accessories	Piston Displacement (Cu. In.)	Compression Ratio	Maximum Torque at R.P.M. (Lb. Ft.) with or without Accessories	Cylinder Liners—Type	Crankcase—Upper Half Integral with Cylinders	Valves: Arrangement	Valves: Exhaust Head Material (S.A.E. No.)	Max. Head Diameter (In.): Intake	Max. Head Diameter (In.): Exhaust	Min. Port Diameter (In.): Intake	Min. Port Diameter (In.): Exhaust	Lift (In.): Intake	Lift (In.): Exhaust	Stem Diameter (In.): Intake	Stem Diameter (In.): Exhaust
1	Mack...... Magnadyne EN291	T	6-3⅞x4⅛	107-2800	100-2800	290.0	6.90	232-1400 (BE)	N	In	L	2112°	2.01	1.53	1.75	1.38	.430	.430	.435	.433
2	.... Magnadyne EN331	T	6-4x4⅜	122-2800	114-2800	330.0	6.90	264-1400 (BE)	N	In	L	2112°	2.01	1.53	1.75	1.38	.430	.430	.435	.433
3	.... Magnadyne EN401	T	6-4 5/16x4 9/16	150-2800	142-2800	401.0	7.29	330-1400 (BE)	N	In	L	Sil(x)°	2.00	1.63	1.75	1.44	.430	.430	.438	.438
4	.... Thermodyne EN464B	T	6-4 7/16x5	185-2800	167-2800	464.0	7.54	380-1400 (BE)	N	In	I	Sil(x)°	2.10	1.54	1.88	1.38	.471	.471	.438	.438
5	.... Thermodyne EN707C	T	6-5x6	232-2100	214-2100	707.0	7.50	618-1200 (BE)	N	In	I	Sil(x)°	2.27	1.96	2.06	1.75	.500	.500	.498	.498
6	.... Thermodyne EN510C	T	6-4 7/16x5½	185-2600	166-2600	510.0	7.68	418-1400 (BE)	N	In	I	Sil(x)°	2.10	1.54	1.88	1.38	.471	.471	.438	.438
7	Minneapolis-Moline 165A	Tr	4-3⅝x4	42-1600	38-1600	165.0	7.35	141-1200 (BE)	N	Se	I	2112N	1.47	1.38	1.25	1.17	.469	.470	.341	.341
8	.... 206H	Ind,Tr	4-3⅝x5	51-1550	45-1550	206.5	7.30	175-1300 (BE)	N	Se	I	2112N	1.47	1.38	1.25	1.17	.469	.470	.341	.341
9	.... V206B	Tr	4-3⅝x5	48-1550	45-1550	206.5	7.30	168-1100 (BE)	N	Se	I	2112N	1.47	1.38	1.25	1.17	.469	.470	.341	.341
10	.... 283B	Tr,Ind	4-4¼x5	59-1300	57-1300	283.7	6.35	240-1200 (BE)	N	Se	I	2112N	1.72	1.59	1.50	1.37	.494	.495	.434	.434
11	.... 283E	Tr	4-4¼x5	67-1500	61-1500	283.7	6.85	244-1300 (BE)	N	Se	I	2112N	1.72	1.59	1.50	1.37	.494	.495	.434	.434
12	.... 403C	Tr,Ind	4-4⅝x6	80-1300	75-1300	403.2	5.90	350-1000 (BE)	N	Se	I	2112N	1.72	1.59	1.50	1.37	.494	.495	.434	.434
13	.... 425A	Ind	6-4¼x5	83-1400	78-1400	425.5	6.85	325- 900 (BE)	N	Se	I	2112N	1.72	1.59	1.50	1.37	.494	.495	.434	.434
14	.... 605A	Ind	6-4⅝x6	105-1200	99-1200	605.0	5.90	465- 800 (BE)	N	Se	I	2112N	1.72	1.59	1.50	1.37	.494	.495	.434	.434
15	 800	Ind	6-5 5/16x6	149-1300	142-1300	800.0	5.26	620-1100 (BE)	N	Se	I	2112°	1.84	1.72	1.62	1.50	.494	.495	.434	.434
16	 1210	Ind	12-4⅝x6	200-1200	180-1200	1210.0	5.90	880- 800 (BE)	N	Se	I	2112N	1.72	1.59	1.50	1.37	.494	.495	.434	.434
17	.... ▲‡1600	Ind	12-5 5/16x6	291-1300	....	1600.0	7.60	1200- 800 (BE)	N	Se	I	2112°	1.72	1.59	1.50	1.37	.494	.495	.434	.434
18	Norseman....... Bluefin Y230	M	6-3 7/16x4⅛	....	113-3500	230.0	7.29	190-1600 (EA)	N	In	L	2112	1.61	1.39	1.50	1.25	.349	.349	.310	.310
19	.... Arrow 230	M	6-3 7/16x4⅛	....	100-3200	230.0	7.29	173-1800 (EA)	N	In	L	2112	1.61	1.39	1.50	1.25	.311	.311	.310	.310
20	.... Marlin 320	M	6-4x4¼	....	110-2500	320.0	6.84	243-1600 (EA)	N	In	L	2112	1.75	1.62	1.50	1.37	.356	.356	.372	.372
21	.... Knight 350	M	6-4x4½	....	165-3300	340.0	7.20	283-1400 (EA)	N	In	L	Aus	1.83	1.68	1.72	1.50	.400	.400	.372	.372
22	.... Bullet 240	M	6-3 7/16x4¼	....	120-3400	236.7	7.47	193-1600 (EA)	N	In	L	Aus	1.61	1.39	1.50	1.25	.349	.349	.310	.310
23	.... Tarpon 330	M	6-4x4¼	....	140-3000	320.4	6.84	239-2400 (EA)	N	In	L	2112	1.83	1.68	1.72	1.50	.356	.356	.372	.372
24	.... Colt 130	M	4-3¼x4	....	60-3200	132.7	7.50	106-2400 (EA)	N	In	L	2112	1.48	1.36	1.25	1.12	.312	.312	.310	.310
25	.... V King KEV	M	8-4 5/16x3 11/16	....	275-3600	430.0	7.50	....	N	In	I	Aus	2.15	1.78	......	......	.441	.441	......	......
26	Oliver.................. 550HC	Tr	4-3⅝x3¾	....	....	155.0	7.75	137-1000 (EA)	W	In	I	Sil	1.50	1.26	1.31	1.25	.360	.360	.373	.372
27	.... 770HC	Tr	6-3½x3¾	....	53-1750	216.5	7.30	....	W	In	I	Sil	1.40	1.26	1.25	1.12	.313	.281	.373	.372
28	.... 880HC	Tr	6-3¾x4	....	65-1750	265.1	7.30	....	W	In	I	Sil	1.51	1.39	1.37	1.24	.344	.344	.373	.372
29	.... 950HC	Tr	6-4x4	....	69-1675	302.0	6.20	232- 800 (EA)	D	In	I	Sil	1.84	1.59	1.68	1.43	.344	.344	.373	.372
30	.... Super 166HC	Ind	4-3⅝x3¾	....	....	155.0	7.75	....	W	In	I	Sil	1.31	1.50	1.31	1.25	.360	.360	.372	.372
31	.... Super 177HC	Ind	6-3½x3¾	....	52-2000	216.0	7.00	164-1000 (EA)	W	In	I	Sil	1.41	1.28	1.25	1.13	.344	.344	.375	.372
32	.... Super 188HC	Ind	6-3¾x4	....	62-2000	265.0	7.00	204-1000 (EA)	W	In	I	Sil	1.53	1.41	1.38	1.38	.344	.344	.373	.372
33	.... Super 199HC	Ind	6-4x4	....	74.6-2000	302.0	6.20	232- 800 (EA)	D	In	I	Sil	1.84	1.59	1.68	1.43	.344	.344	.373	.372
34	.... Super 225HC	Ind	6-4¾x5¼	154-2400	....	558.0	6.30	430-1100 (BE)	N	In	L	2112N	2.00	2.00	1.81	1.75	.388	.388	.373	.373
35	Palmer.................. 27	M	1-3¼x3¼	....	8-2800	27.0	6.50	6-2800 (EA)	N	Se	L	Sil	1.34	1.34	1.15	1.15	.281	.281	.310	.310
36	 60	M	4-2⅝x2¾	....	22-3000	59.5	6.50	34-2000 (EA)	N	In	L	CNS	1.10	.910	.980	.790	.222	.222	.310	.310
37	 134	M	4-3¼x4	....	60-3000	133.0	7.20	92-2000 (EA)	N	In	L	CNS	1.48	1.35	1.25	1.12	.312	.312	.310	.310
38	 240	M	6-3 7/16x4 5/16	....	120-3200	240.3	7.50	196-1800 (EA)	N	In	I	CNS	1.66	1.52	1.50	1.38	.398	.398	.372	.370
39	 264	M	6-3 11/16x4⅛	....	135-3400	264.0	7.50	234-2000 (EA)	N	In	I	21-4NS	1.66	1.52	1.50	1.38	.398	.398	.372	.370
40	 308	M	6-3 13/16x4½	....	150-3400	308.0	7.50	274-2000 (EA)	N	In	I	21-4NS	1.81	......	1.69	......	.407	......	.372	......
41	.... IHV-461	M	8-4¼x4 1/16	....	250-3600	461.0	7.00	420-1600 (EA)	N	In	I	St	2.08	1.81	1.94	1.63	.426	.426	.435	.434
42	Red Wing......... Meteor 20	M	4-2½x3⅛	18-2600	16-2600	61.3	5.70	40-1700 (BE)	N	Se	L	Sil	1.12	.937	1.00	.812	.228	.250	.312	.312
43	.... Arrowhead 40	M	4-3¼x4	38-2600	35-2600	133.0	5.58	92-1200 (EA)	N	In	L	Sil	1.34	1.34	1.18	1.18	.281	.281	.312	.312
44	.... Arrowhead 50	M	4-3⅝x4½	43-2200	37-2200	186.0	5.50	128- 900 (EA)	N	In	L	Sil	1.56	1.56	1.37	1.37	.281	.281	.375	.375
45	.... Meteor 65	M	4-3¼x4¼	....	65-3200	141.0	6.50	....	N	In	L	2112N	1.48	1.35	1.25	1.12	.250	.250	.310	.310
46	.... Meteor 115	M	6-3 7/16x4¼	....	115-3400	236.7	......	....	N	In	L	2112N	1.64	1.44	1.50	1.25	.311	.311	.310	.310
47	.... Meteor 160	M	6-4x4½	....	160-3200	339.0	......	....	N	In	L	2112N	1.83	1.67	1.72	1.50	.356	.356	.373	.373
48	Reo........... ▲OA-331-LPG	T	6-4⅛x4⅛	142-3200	130-3200	331.0	8.20	258-1800 (BE)	W	In	I	2112	2.00	1.80	1.83	1.63	.420	.420	.438	.438
49	.... OH-170	T,B	6-4⅛x4⅛	170-3400	158-3400	331.0	7.50	297-1600 (BE)	W	In	I	Sil(x)	2.00	1.80	1.83	1.63	.420	.440	.438	.438
50	.... ▲255-OA-LPG	T	6-3⅝x4⅛	100-3400	86-3400	255.0	7.15	182-1600 (BE)	W	In	I	2112	2.00	1.80	1.83	1.63	.420	.420	.438	.438
51	.... ▲OH-160-LPG	T	6-4⅛x4⅛	160-3300	146-3200	331.0	8.20	280-1200 (BE)	W	In	I	Sil	2.00	1.79	1.85	1.62	.225	.236	.438	.438
52	.... OV-207	T	8-3⅞x4⅛	207-3400	186-3400	390.0	7.30	354-2400 (BE)	W	In	I	Sil(x)	2.00	1.80	1.83	1.63	.441	.466	.438	.438
53	.... OV-235	T	8-4⅛x4⅛	235-3400	213-3400	440.0	7.30	412-2400 (BE)	W	In	I	Sil(x)	2.00	1.80	1.83	1.63	.441	.466	.438	.438
54	.... ▲OV-220-LPG	T	8-4⅛x4⅛	220-3200	203-3200	440.0	8.50	405-2000 (BE)	W	In	I	Sil	2.00	1.80	1.83	1.63	.441	.466	.438	.438
55	.... OA-110	T,B	6-3⅝x4⅛	110-3400	98-3400	255.0	6.70	194-1400 (BE)	W	In	I	2112	2.00	1.83	1.80	1.63	.420	.420	.438	.438
56	.... OA-130	T,B	6-3⅞x4⅛	130-3300	119-3300	292.0	6.94	230-1600 (BE)	W	In	I	Sil(x)	2.01	1.80	1.83	1.62	.420	.420	.435	.434
57	.... OA-145	T,B	6-4⅛x4⅛	145-3200	134-3200	331.0	6.73	270-1600 (BE)	W	In	I	Sil(x)	2.00	1.83	1.80	1.63	.420	.420	.438	.438
58	.... OH-185	T,B	6-4¼x4¼	185-3400	170-3400	362.0	7.50	320-1200 (BE)	W	In	I	Sil(x)	2.00	1.79	1.76	1.62	.420	.440	.438	.438
59	Roi Line.............. H540	Tr,Ind	8-4½x4¼	180-2600	177-2800	540.0	6.70	421-1600 (EA)	W	In	I	2112	1.94	1.50	1.62	1.37	.410	.410	.373	.372
60	.... TH540	T,B	8-4½x4¼	206-3000	....	540.0	6.70	450-1800 (BE)	W	In	I	2112(y	1.94	1.54	1.62	1.37	.410	.410	.373	.373
61	.... H844	Tr,Ind	8-5¼x4⅞	286-2400	270-2400	844.0	6.70	710-1700 (BE)	W	In	I	21-4N°	2.26	1.79	2.18	1.63	.450	.450	.435	.434
62	.... TH844	T,B	8-5¼x4⅞	296-2600	265-2600	844.0	6.70	730-1700 (BE)	W	In	I	2112(y	2.26	1.79	2.18	1.63	.450	.450	.435	.434
63	.... H884	Tr,Ind	8-5⅜x4⅞	330-2600	300-2600	884.0	7.62	780-1800 (BE)	W	In	I	2112(y	2.26	2.00	2.12	1.86	.480	.480	.434	.434
64	.... TH884	T,B	8-5⅜x4⅞	330-2600	300-2600	884.0	7.62	780-1800 (BE)	W	In	I	2112(y	2.26	2.00	2.12	1.86	.480	.480	.434	.434
65	.... F1500	Ind	6-6¾x7	215-1200	205-1200	1503.0	5.06	1090- 650 (BE)	N	Se	I	Sil	2.81	2.81	2.12	2.50	.548	.548	.624	.624
66	.... F1500	Ind	6-6¾x7	230-1200	220-1200	1503.0	6.20	1165- 650 (BE)	N	Se	I	Sil	2.81	2.81	2.12	2.50	.548	.548	.624	.624
67	.... H2000	Ind	8-6¾x7	295-1200	275-1200	2004.0	5.06	1485- 650 (BE)	N	Se	I	Sil	2.81	2.81	2.12	2.50	.548	.548	.624	.624
68	.... H2000	Ind	8-6¾x7	300-1200	280-1200	2004.0	6.20	1590- 650 (BE)	N	Se	I	Sil	2.81	2.81	2.12	2.50	.548	.548	.624	.624
69	.... L3000	Ind	12-6¾x7	435-1200	410-1200	3006.0	5.06	2200- 650 (BE)	N	Se	I	Sil	2.81	2.81	2.12	2.50	.548	.548	.624	.624
70	.... L3000	Ind	12-6¾x7	470-1200	435-1200	3006.0	6.20	2360- 700 (BE)	N	Se	I	Sil	2.81	2.81	2.12	2.50	.548	.548	.624	.624
71	.... L3460	Ind	12-7¼x7	595-1350	586-1350	3468.0	4.57	2870- 900 (BE)	W	In	I	Sil	3.37	2.84	2.75	2.62	.625	.625	.622	.621
72	.... L3460	Ind	12-7¼x7	660-1350	640-1350	3468.0	6.73	2710- 900 (EA)	W	In	I	Sil	3.37	2.84	2.75	2.62	.625	.625	.622	.621
73	.... L4000	Ind	12-7½x7½	656-1350	636-1350	4018.0	4.86	2950- 800 (BE)	W	In	I	Sil	3.37	2.84	2.75	2.62	.625	.625	.623	.622
74	.... L4000	Ind	12-7½x7½	734-1350	713-1350	4018.0	7.00	3305- 800 (BE)	W	In	I	Sil	3.37	2.84	2.75	2.62	.625	.625	.623	.622
75	Sterling....... Viking II-TC-6	Tr,Ind	6-8x9	....	450-1200	2714.0	♣♣	2015- 900 (EA)	W	Se	I	Sil	2.59	2.59	......	......	.556	.556	.557	.557
76	.... Viking II-TC-6	Tr,Ind	6-8x9	....	345- 900	2714.0	♣♣	2015- 900 (EA)	W	Se	I	Sil	2.59	2.59	......	......	.556	.556	.557	.557
77	.... Viking II-T-8	M	8-8x9	....	600-1200	3619.0	5.20	2685- 900 (EA)	W	Se	I	Sil	2.59	2.59	......	......	.556	.556	.557	.557
78	.... Viking II-TC-8	Tr,Ind	8-8x9	....	600-1200	3619.0	♣♣	2685- 900 (EA)	W	Se	I	Sil	2.59	2.59	......	......	.556	.556	.557	.557
79	.... Viking II-TC-8	Tr,Ind	8-8x9	....	460- 900	3619.0	♣♣	2685- 900 (EA)	W	Se	I	Sil	2.59	2.59	......	......	.556	.556	.557	.557
80	.... Petrel-LC-6	Ind	6-5¼x6	....	210-2000	780.0	6.00	550-1700 (EA)	N	Se	L	Sil	2.25	2.25	......	......	.475	.475	.437	.437
81	.... Petrel-L-6	M	6-5¼x6	....	258-2500	780.0	6.00	550-1700 (EA)	N	Se	L	Sil	2.25	2.25	......	......	.583	.583	.437	.437

For abbreviations, see pages 182 and 183

For Directory of the Engine Manufacturers listed above, see Table of Contents

TRACTOR, MARINE, OR INDUSTRIAL USE—*continued*

Valves: Seats: Angle (Deg.)	Valves: Seats: Inserts Used?	Valves: Seats: Insert Material (S.A.E. No.)	Camshaft Drive—Type	Pistons: Material	Pistons: Weight with Pins, Rings, Bushings (Oz.)	Pistons: Piston Pin—Diameter and Length (In.)	Number of Rings per Piston	Connecting Rods: Material	Connecting Rods: Center to Center Length (In.)	Connecting Rods: Weight with Bushing and Cap (Oz.)	Crankshaft: Material	Crankshaft: Counter Balance Used	Crankshaft: Crank-Pin: Diameter and Length (In.)	Crankshaft: Main Bearings: Number	Crankshaft: Main Bearings: Diameter and Length (In.): Front	Crankshaft: Main Bearings: Diameter and Length (In.): Rear	Oil Pressure to—	Carburetor: Make	Carburetor: Size	Engines Weight without Carburetor or Ignition (Lb.)	Overall Dimensions (In.): Width	Overall Dimensions (In.): Height	Overall Dimensions (In.): Length	Clutch Housing (S.A.E. Nos.)	Line Number
(h)	E	Nif°(x	HG	Alt	47	1.12x3.18	5	4130	10 1/8	64	1046‡	Y	2.38x1.62	7	3.00x1.41	3.00x2.12	acdefg	Zen	1 1/4	920	28 3/16	35 7/16	44 5/8	3	1
(h)	E	Nif°	HG	Alt	52	1.12x3.45	5	4130	10 1/8	64	1046‡	Y	2.38x1.62	7	3.00x1.41	3.00x2.12	acdefg	Zen	1 1/4	920	28 3/16	35 7/16	44 3/4	3	2
(h)	E	Nif°(x	HG	Alt	51	1.13x3.45	5	4130	10 7/8	64	1046‡	Y	2.38x1.62	7	3.00x1.41	3.50x2.13	abcdfg	Zen	1 1/4	1070	28 5/8	36 1/8	45 5/8	3	3
(h)	E	Nif°(x	HG	Alt	69.0	1.31x3.56	4	4130	10 7/8	88.8	1046‡	Y	2.75x1.58	7	3.50x1.69	3.50x2.22	abcdfg	Zen	2	1522	26	43 7/8	49 11/16	2	4
(h)	E	Nif°(x	HG	Alt	91	1.43x4.43	5	4130	11 1/4	116	1050‡	Y	3.00x1.91	7	4.00x1.57	4.00x2.58	acdefg	Zen	1 3/4	1902	28 1/4	49 1/8	51	1	5
(h)	E	Nif°(x	HG	Alt	65.0	1.31x3.56	4	4130	10 1/2	84.3	1050‡	Y	2.75x1.58	7	3.50x1.69	3.50x2.22	abcdfg	Zen	2	1545	26	43 7/8	49 5/16	2	6
45	E	E-S	HG	Cl	53.3	1.00x3.00	4	1041	9 1/4	58.0	1046	N	2.62x1.50	3	2.75x1.75	3.00x2.18	acdefg	MaS	1	700*	20	36 1/4	36 5/8	......	7
45	E	E-S	HG	Cl	53.3	1.00x3.00	4	1041	8 3/4	50.0	1046	N	2.62x1.50	3	2.75x1.75	3.00x2.18	acdefg	MaS	1	720*	20	36 1/4	36 5/8	4	8
45	E	E-S	HG	Cl	53.5	1.00x3.00	4	1041	8 3/4	50.0	1046	N	2.62x1.50	2	RB	Ba	acdefg	MaS	1	680*	33	34	31 1/2	......	9
45	E	E-S	HG	Cl	89.0	1.25x3.75	4	1041	10	94.0	1046	N	2.57x2.50	3	2.91x2.68	2.91x3.50	acdefg	MaS	1 1/4	1090*	24 7/8	24 7/8	42 3/4	2	10
45	E	E-S	HG	Cl	89.0	1.25x3.75	4	1041	10	94.0	1046	N	2.57x2.50	3	2.91x2.68	2.91x3.50	acdefg	MaS	1 1/4	1090*	24	39 5/16	39 3/8	2	11
45	E	E-S	HG	Al	83.3	1.25x3.93	4	1041	11 1/4	123.0	1046	N	2.75x2.38	3	2.91x2.68	2.91x3.50	acdefg	MaS	1 1/4	1276*	24 3/8	43 1/4	42 7/8	2	12
45	E	E-S	HG	Cl	89.0	1.25x3.75	4	1041	10	94.0	1046	Y	2.57x2.50	4	2.91x2.68	2.91x3.50	acdefg	Zen	1 1/2	u2000*	24 5/8	42 3/8	56	2	13
45	E	E-S	HG	Al	122.0	1.25x3.93	4	1041	11 1/4	123.0	1045	Y	2.75x2.38	4	2.91x2.68	2.91x3.50	acdefg	Zen	1 1/2	u2268*	26 1/2	45	56 3/4	1	14
45	E	E-S	HG	Al	112.0	1.75x4.53	4	1041	11 1/4	136.0	1046	Y	3.25x2.38	4	3.49x2.53	3.49x3.13	acdefg	Zen	1 3/4	u2475*	26 3/4	47 3/8	61	1	15
45	E	CAl	HG	Cl	122.0	1.25x4.13	4	1041	11 1/4	123.0	1045	Y	2.75x2.38	4	2.91x2.68	2.91x3.50	acdefg	Zen(2)	1 1/2	u5800*	45	70 5/8	114 3/4	......	16
45	E	E-S	HG	Al	112.0	1.75x4.53	4	1041	11 1/4	145.0	1046	Y	3.25x2.38	4	3.49x2.53	3.49x3.13	acdefg	Ens(2)	1 1/2	u6325*	44 1/4	72 1/2	111 3/4	......	17
30	N	......	HG	Al	26	.875x2.90	3	1035	7	26	1340‡	N	2.00x1.25	7	2.50x1.31	2.50x1.93	acdgr	Zen	1 1/2	714	24 1/4	23 1/8	43 1/4	6	18
30	N	......	HG	Al	26	.875x2.90	3	1035	7	26	3140‡	N	2.00x1.25	7	2.50x1.31	2.50x1.93	acdgr	Zen	1 1/2	780	24 1/4	23 1/8	45 5/8	6	19
30	N	......	HG	Al	40.5	1.00x3.50	3	1040	8	37	3140‡	N	2.00x1.50	7	2.50x1.31	2.50x2.12	acdgr	Zen	1 1/2	920	24 1/4	25	49 1/2	6	20
30	N	......	HG	Al	44.5	1.12x3.44	3	1035	8	39.2	3140‡	Y	2.00x1.50	7	2.50x1.31	2.50x2.12	abcdgr	Zen	2	935	24 1/4	25	47 1/8	6	21
30	N	......	HG	Alt	25	.875x2.90	3	1035	7	26	3140	Y	1.98x1.25	7	2.50x1.31	2.50x1.93	abcdgr	Zen	1 1/2	744	24 1/4	23 1/8	43 1/4	6	22
30	N	......	HG	Al	40.5	1.00x3.50	4	1040	8	37	3140‡	....	2.00x1.50	7	2.50x1.31	2.50x2.12	acdgr	Zen	1 3/4	925	24 1/4	25	47 1/8	6	23
30	N	......	HG	Alt	21.0	.750x2.83	3	3140	6 5/16	22.0	Ste‡	....	1.75x1.12	3	1.98x1.62	1.98x1.37	acgr	Zen	1 1/4	456*	24 1/8	21 1/2	31 7/32	......	24
....	N	......	Ch	Al	.....	....	3	CS	.....	.....	Al	Y	2.59x....	5	2.90x....	2.90x....	abcdfg	Hol	....	915	30 7/8	31 1/2	46 11/16		25
45	E	Al	HG	Alt	.....	1.25x2.75	4	1045	6 3/4	.....	1045	Y	2.25x1.38	3	2.25x1.63	2.25x1.63	acf	MaS	1	466	18 1/2	28 1/4	30 7/8	......	26
45	E	Al	HG	Alt	.....	1.25x2.75	4	1045	6 3/4	43	1045	N	2.25x1.38	4	2.25x1.63	2.25x1.63	acf	M-Z	1	632	18 1/2	27 3/4	39 7/8	......	27
45	E	Al	HG	Alt	66.0	1.25x3.00	4	1045	6 3/4	47	1045	N	2.44x1.38	4	2.63x1.75	2.63x1.75	acf	Zen	1 1/4	682	18 1/2	27 7/8	41 1/2	......	28
45	E	Al	HG	Al	66.0	1.25x3.44	4	1045	6 3/4	41	1045	....	2.63x1.38	4	2.63x1.56	2.63x1.56	abcdfg	MaS	1 1/4	876	21 1/4	30 3/32	43 5/16	......	29
45	E	Al	HG	Al	.....	1.25x2.75	4	1045	6 3/4		1045	....	2.25x1.38	3	2.25x1.63	2.25x1.63	acf	MaS	1	546	22	29 7/32	30 5/16	4,5	30
45	E	Al	HG	Al	35.0	1.25x2.75	4	1045	6 3/4	43.0	1045	....	2.25x1.38	4	2.25x1.44	2.25x1.44	acfg	MaS	1	716	22	29 7/32	40 7/32	4	31
45	E	Al	HG	Al	62.0	1.25x3.00	4	1045	6 3/4	47.0	1045	....	2.44x1.38	4	2.63x1.50	2.63x1.50	acfg	MaS	1 1/4	817	22	32 11/32	41 11/64	3	32
(v)	E	Al	HG	Al	66.0	1.25x3.44	4	1045	6 3/4	41.0	1045	....	2.25x1.38	4	2.63x1.56	2.63x1.56	abcdfg	MaS	1 1/4	876	22	33 1/32	43 7/32	3	33
(h)	E	Eat	HG	Al	66.0	1.25x4.20	4	4342	9 3/8	97.0	CS	....	3.00x2.00	7	3.50x1.93	3.50x2.93	acg	Op	1 3/4	1195	25 7/8	35 7/32	46 5/16	1	34
45	N	......	HG	Al	15	.750x3.00	3	1040	7	20	Al	Y	1.50x1.31	2	(j)	(j)	PS	Zen	3/4	150	16	18 1/2	21	......	35
45	N	......	HG	Cl	20	.688x2.19	3	......	5	16	C1045	Y	1.50x.875	3	1.62x....	1.62x....	acd	Zen	7/8	350	21	.....	28 3/4	N	36
30	N	......	HG	Al	20 1/2	.75x2.87	3	3140	6 5/16	23 1/2	CS‡	N	1.75x1.12	3	2.00x1.56	2.00x1.62	acd	Zen	1 1/4	u445	19	20 1/2	39	......	37
30	E	Duc	HG	Al	.....	.875x2.95	4	......	6 11/16	.....	C1046	Y	2.38x1.50	4	2.75x1.38	2.75x1.94	acdf	Zen	1 1/2	850	24 1/2	28	46	6	38
30	E	SAC	HG	Al	.....	.875x2.95	4	SF	6 11/16	.....	1046	Y	2.38x1.50	4	2.75x1.38	2.75x1.94	acdfg	Zen	1 1/2	850	24 1/2	38	46	6	39
15	E	SAC	HG	Al	40.2	.919x3.20	4	SF	8 5/16	.....	1046	Y	2.13x1.44	4	2.70x....	2.70x....	acdfg	Zen	1 3/4	920	24 1/2	29 1/2	46 1/2	6	40
45	E	St	HG	Al	43.1	1.31x3.01	3	SF	8	50.1	C1046	Y	2.63x2.55	5	3.13x.969	3.13x.969	acdefg	Hol	....	1600	38	38	57	2	41
45	N	......	HG	Al	8	.625x2.12	3	1045	6	14	1045	N	1.56x1.25	2	ND3207	ND3207	adg	MaS	3/4	240	18 1/4	19 1/8	27 7/16	......	42
45	E	CA	HG	Cl	30	.875x2.75	3	1045	7 1/4	29	1045	N	1.75x1.25	3	2.12x1.43	2.12x1.18	abcdg	Zen	1	490	21 3/8	24 1/16	35	......	43
45	E	CA	HG	Cl	45	1.10x3.06	4	1045	8 3/4	46	1045	N	2.00x1.50	3	2.00x2.50	2.00x1.87	abcdg	Zen	1	610	19 1/8	26 1/4	41	5	44
30	N	......	HG	Al	29.5	.750x2.81	4	3140	6 5/16	21.0	4140	....	1.75x1.12	3	2.00x1.56	2.00x1.62	acdg	Zen	1	425	22 1/2	21	32 5/8	......	45
30	N	......	HG	Al	26.0	.875x2.92	3	1035	7	26.0	1046‡	....	2.00x1.25	7	2.50x1.31	2.50x1.93	acg	Zen	1 1/2	625	22 1/2	24	42 1/8	......	46
30	N	......	HG	Al	44.5	1.12x3.44	3	3140	8	39.2	1046‡	....	2.00x1.25	7	2.50x1.31	2.50x2.12	acg	Zen	1 3/4	825	22 1/2	25	46 1/2	......	47
30	Bo	♦	HG	Al	41.4	1.13x3.59	4	1340	7 1/4	56	1045	....	2.18x1.62	7	2.51x1.62	2.51x1.62	acdfg	Ens	1 3/4	914*	25 1/2	34 1/16	45 7/32	3	48
30	E	St	HG	Als	42	1.13x3.59	4	1340	7 1/4	52	1045	....	2.31x1.30	7	2.75x1.30	2.75x1.30	acdfg	Zen	1 1/4	963*	24 5/16	33 7/32	45 7/32	3	49
30	Bo	Ste	HG	Al	29.9	1.13x3.11	4	1340	7 1/4	50.2	1045	....	2.18x1.38	7	2.50x1.34	2.50x1.34	acdfg	Ens	1 1/2	872*	25 1/2	34 1/16	45 7/32	3	50
30	Bo	♦	HG	Al	41.4	1.13x3.54	4	1340	7 1/4	52	1045	....	2.31x1.30	7	2.75x1.30	2.75x1.30	acdfg	Alg	1 1/4	995*	24 5/16	34 1/16	45 7/32	3	51
30	Bo	♦	HG	Al	39.2	1.06x3.37	4	1340	7 5/8	45	1045	....	2.50x.927	5	3.00x1.22	3.00x1.71	acdfg	Car	....	1211*	27 5/8	36 3/4	39 1/2	2	52
30	Bo	♦	HG	Al	39.2	1.06x3.59	4	1340	7 5/8	45	1045	....	2.50x.927	5	3.00x1.22	3.00x1.71	acdfg	Car	....	1211*	27 5/8	36 3/4	39 1/2	2	53
30	Bo	♦	HG	Al	39.2	1.06x3.59	4	1340	7 5/8	45.0	1045	....	2.50x.927	5	3.00x1.22	3.00x1.71	acdfg	Cen	....	1262*	27 5/8	36 3/4	39 1/2	2	54
30	E	Eat	HG	Alt	31.9	1.12x3.11	4	1340	7 1/4	56	1045	....	2.17x1.38	7	2.51x1.34	2.51x1.34	acdf	Car	1 1/2	872*	25 1/2	34 1/16	45 7/32	3	55
30	E	Eat	HG	Alt	34.7	1.12x3.59	4	1340	7 1/4	56	1045	....	2.17x1.38	7	2.50x1.34	2.50x1.34	acdf	Zen	1 1/4	870*	25 1/2	34 1/16	45 7/32	3	56
30	E	Eat	HG	Alt	40.0	1.12x3.59	4	1340	7 1/4	56	1045	....	2.17x1.38	7	2.50x1.34	2.50x1.34	acdf	Zen	1 1/4	872*	25 1/2	34 1/16	45 7/32	3	57
30	E	Eat	HG	Alt	46.4	1.06x3.59	4	1340	7 1/4	52	1045	....	2.31x1.30	7	2.75x1.30	2.75x1.30	acdf	Hol	1 1/2	970*	25 1/2	34 1/16	45 7/32	2,3	58
45	E	T-12	HG	Al	62.0	1.25x3.93	4	1045	8 1/2	49.0	1046	Y	2.75x2.75	5	3.25x1.12	3.25x1.12	acdef	Zen	1 1/4	1300	30 5/8	39 3/4	42 3/4	1,2	59
45	Bo	Sil°	HG	Al	62.0	1.25x3.93	4	1045	8 1/2	49.0	1046	Y	2.75x2.75	5	3.25x1.12	3.25x1.12	acdef	Zen	2	1355	30 5/8	43	44 5/8	2	60
45	E	Sil°	HG	Al	99.0	1.50x4.56	4	1045	9 3/4	70.4	1046	Y	3.25x3.13	5	3.75x1.39	3.75x1.39	acdef	Zen	1 3/4	1870*	33 1/2	49	49 1/2	0,1	61
45	E	Sil°	HG	Al	99.0	1.50x4.56	4	1045	9 3/4	70.4	1046	Y	3.25x3.13	5	3.75x1.39	3.75x1.39	acdef	Zen	1 3/4	1900*	33 1/2	46	48 5/8	1	62
45	Bo	St	HG	Al	98.6	1.50x4.34	4	1045	9 3/4	70.4	1046	Y	3.25x3.13	5	3.75x1.39	3.75x1.39	acdef	Ens	2 1/2	1900	33 1/2	46	48 5/8	0,1	63
45	Bo	St	HG	Al	98.6	1.50x4.34	4	1045	9 3/4	70.4	1046	Y	3.25x3.13	5	3.75x1.39	3.75x1.39	acdef	Zen	1 3/4	1900	33 1/2	46	48 5/8	1	64
45	E	T-12	HG	Al	205.0	1.75x6.12	4	1045	14	236.0	4140	N	3.50x3.75	4	3.93x5.25	3.93x5.25	acdf	Zen(2)	1 3/4	3750	43	59	80	0,00	65
45	E	T-12	HG	Al	227.0	1.75x6.12	4	1045	14	236.0	4140	N	3.50x3.75	4	3.93x5.25	3.93x5.25	acdf	Ens(2)	1 3/4	3750	43	59	80	0,00	66
45	E	T-12	HG	Al	205.0	1.75x6.12	4	3140	15	240.0	1045	Y	3.50x3.75	3	3.93x5.25	3.93x5.25	acdf	Zen(2)	2	3900	45	65	64	00	67
45	E	T-12	HG	Al	227.0	1.75x6.12	4	3140	15	240.0	1045	Y	3.50x3.75	3	3.93x5.25	3.93x5.25	acdf	Ens	3	3900	45	67	64	00	68
45	E	T-12	HG	Al	205.0	1.75x6.12	4	3140	15	240.0	4140	N	3.50x3.75	4	3.93x5.25	3.93x5.25	acdf	Zen(4)	1 3/4	5300	45	65	78	00	69
45	E	T-12	HG	Al	227.0	1.75x6.12	4	3140	15	240.0	4140	N	3.50x3.75	4	3.93x5.25	3.93x5.25	acdf	Ens	3 1/2	5300	45	65	78	00	70
45	E	3140°	HG	Al	256.0	2.25x6.37	4	1040	15	282.0	1046	Y	5.00x4.75	8	5.50x2.38	5.50x4.31	acdef	Zen(4)	2	10300	49	75	99 5/8	00	71
45	Bo	3140°	HG	Al	256.0	2.25x6.37	4	1040	15	282.0	1046	Y	5.00x4.75	8	5.50x2.38	5.50x4.31	acdef	Ens(2)	3 1/2	10300	49	74 1/2	99 5/8	00	72
45	E	3140°	HG	Al	263.0	2.25x6.36	4	1040	15	282.0	1046	Y	5.00x4.75	8	5.50x2.38	5.50x4.31	acdef	Zen(4)	2	11500	49	75	130 1/4	00	73
45	Bo	3140°	HG	Al	263.0	2.25x6.36	4	1040	15	282.0	1046	Y	5.00x4.75	8	5.50x2.38	5.50x4.31	acdef	Ens(2)	3 1/2	11500	49	47 1/2	130 1/2	00	74
45	E	T-12	Ch	Al	328	2.00x7.00	4	CS	18	416	CNS	Y	4.00x3.12	9	4.00x3.37	4.00x5.50	abcdeg	Zen(3)	2 1/2	7500	45	64 7/8	100 7/8	00	75
45	E	T-12	Ch	Al	328	2.00x7.00	4	CS	18	416	CNS	Y	4.00x3.12	9	4.00x3.37	4.00x5.50	abcdeg	Zen(3)	2 1/2	7500	45	64 7/8	100 7/8	00	76
45	E	T-12	Ch	Al	328	2.00x7.00	4	CS	18	416	CNS	Y	4.00x3.12	9	4.00x3.37	4.00x5.50	abcdeg	Zen(4)	2 1/2	9900	44 5/16	61 3/8	142 3/8	......	77
45	E	T-12	Ch	Al	328	2.00x7.00	4	CS	18	416	CNS	Y	4.00x3.12	9	4.00x3.37	4.00x5.50	abcdeg	Zen(4)	2 1/2	9000	45	64 7/8	121 3/8	00	78
45	E	T-12	Ch	Al	328	2.00x7.00	4	CS	18	416	CNS	Y	4.00x3.12	9	4.00x3.37	4.00x5.50	abcdeg	Zen(4)	2 1/2	9000	45	64 7/8	121 3/8	00	79
45	E	T-12	HG	Al	91	1.43x4.37	5	1035	12 1/2	113	CNS	Y	2.50x2.12	7	3.00x1.75	3.00x2.87	abcdeg	Zen(2)	1 3/4	2300	33	41 1/2	59 1/2	1	80
45	E	T-12	HG	Al	91	1.43x4.37	5	1035	12 1/2	113	CNS	Y	2.50x2.12	7	3.00x1.75	3.00x2.87	abcdeg	Zen(2)	1 3/4	1900	33	34 1/2	73 3/8	......	81

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1959 GASOLINE ENGINES FOR TRUCK, BUS,

Line Number	ENGINE MAKE AND MODEL	Designed for	Number of Cylinders, Bore and Stroke (In.)	MAXIMUM BRAKE Hp. at Specified R.P.M. — With Bare Engine	With Standard Accessories	Piston Displacement (Cu. In.)	Compression Ratio	Maximum Torque at R.P.M. (Lb. Ft.) with or without Accessories	Cylinder Liners—Type	Crankcase—Upper Half Integral with Cylinders	VALVES — Arrangement	Exhaust Head Material (S.A.E. No.)	Max. Head Diameter (In.) — Intake	Exhaust	Min. Port Diameter (In.) — Intake	Exhaust	Lift (In.) — Intake	Exhaust	Stem Diameter (In.) — Intake	Exhaust
1	Studebaker 1E	T	6-3x4	...	75-3800	169.6	8.00	133-1600 (EA)	N	In	L	2112	1.34	1.28	1.19	1.13	.344	.344	.313	.313
2	4E	T	6-3 5/16x4 3/4	...	94-3200	245.6	7.50	196-1400 (EA)	N	In	L	2112	1.47	1.28	1.31	1.13	.344	.344	.344	.344
3	3E, 5E	T	8-3 9/16x3 1/4	...	141-3800	259.2	7.50	225-2400 (EA)	N	In	I	2112N	1.66	1.53	1.49	1.37	.359	.359	.344	.344
4	6E, 7E	T	8-3 9/16x3 5/8	...	154-3800	289.0	7.50	260-2400 (EA)	N	In	I	2112N	1.66	1.53	1.49	1.37	.359	.359	.344	.344
5	Universal BlueJacketTwinAFTL	M	2-3x3 1/2	12-2200	...	49.5	5.79	...	N	In	L	Sil	1.68	1.68	1.50	1.50	.250	.250	.375	.375
6	Atomic Four-UJ	M	4-2 9/16x3 1/8	30-3500	...	64.5	6.32	...	N	In	L	Sil	1.21	1.03	1.06	.875	.240	.240	.312	.312
7	Atomic Four-UJVD	M	4-2 9/16x3 1/8	30-3500	...	64.5	6.32	...	N	In	L	Sil	1.21	1.03	1.06	.875	.240	.240	.312	.312
8	Utility Four-BN	M	4-2 3/4x4	25-2200	...	95.0	4.70	...	N	In	L	Sil	1.25	1.25	1.12	1.12	.234	.234	.312	.312
9	Unimite Four-HF	M	4-3 1/4x4 1/4	70-3500	...	141.0	...	...	N	In	L	Aus	1.48	1.35	1.25	1.12	.250	.250	.310	.310
10	Unimite Four-HFVD	M	4-3 1/4x4 1/4	70-3500	...	141.0	...	...	N	In	L	Aus	1.48	1.35	1.25	1.12	.250	.250	.310	.310
11	Super Four LSG	M	4-3 1/4x4 1/2	55-3000	...	149.3	5.70	...	N	Se	L	Sil	1.56	1.56	1.37	1.37	.312	.312	.375	.375
12	Explorer Six-OK, OKVD	M	6-3 7/16x4 1/8	105-3200	...	230.0	7.50	186-1500 (EA)	N	In	L	2112N	1.64	1.40	1.50	1.25	.311	.311	.310	.310
13	Master Six-OL	M	6-3 7/16x4 1/4	115-3200	...	237.0	7.50	192-1500 (EA)	N	In	L	2112N	1.64	1.40	1.50	1.25	.311	.311	.310	.310
14	Super Six-Com'dore-Z, ZVD	M	6-4x4 1/2	155-3200	...	339.2	7.20	265-2000 (EA)	N	In	L	Aus	1.83	1.67	1.72	1.50	.356	.356	.373	.373
15	Super Six-Stevedor-ZS	M	6-4x4 1/2	130-2800	...	339.2	7.25	...	N	In	L	Aus	1.83	1.67	1.72	1.50	.356	.356	.373	.373
16	Waukesha (12) ICK	Ind	4-2 1/2x3 1/8	18-2600	16-2400	61.3	5.70	41-1800 (BE)	N	Se	L	Sil	1.12	.937	1.00	.812	.228	.250	.312	.312
17	(12) FC	T,Tr,Ind	4-3 1/4x4	35-2400	30-2200	133.0	5.58	97-1400 (BE)	N	In	L	Sil	1.34	1.34	1.18	1.18	.281	.281	.312	.312
18	(11) 180GKB	T,Tr,Ind	4-3 5/8x3 3/4	50-2400	41-2000	155.0	7.50	131-1400 (BE)	W	In	I	Sil	1.45	1.41	1.18	1.00	.312	.281	.373	.372
19	(12) XAH	T,Tr,Ind	4-3 5/8x4 1/2	47-2000	44-2000	186.0	5.50	131-1400 (BE)	N	In	L	Sil	1.56	1.56	1.37	1.37	.302	.275	.375	.375
20	(11) 185GLB	T,Tr,Ind	6-3 1/2x3 3/4	67-2400	59-2200	216.0	6.75	176-1400 (BE)	W	In	I	Sil	1.31	1.12	1.18	1.00	.312	.281	.372	.373
21	(11) 190GLB	T,Tr,Ind	6-3 3/4x4	77-2200	68-2000	265.0	6.50	223-1200 (BE)	W	In	I	Sil	1.40	1.28	1.25	1.12	.359	.375	.375	.376
22	(11) 195GK	T,Tr,Ind	6-4 1/8x4	103-2400	88-2200	320.0	6.20	241-1400 (BE)	N	In	I	Sil	1.84	1.59	1.69	1.44	.406	.411	.373	.372
23	(11) 195GKA	T,Tr	6-4 1/8x4	122-3000	90-2200	320.0	6.20	244-1400 (BE)	N	In	I	Sil	1.84	1.59	1.69	1.44	.406	.411	.372	.372
24	▾▾(11) 135GKB	T,B,Tr	6-4 1/4x5	147-2800	121-2200	426.0	6.25	337-1200 (BE)	D	In	I	Sil	2.06	1.81	1.87	1.62	.455	.423	.435	.433
25	▾▾(11) 135GZB	T,B,Tr	6-4 3/8x5	153-2800	130-2200	451.0	6.30	354-1200 (BE)	N	In	...	Sil	2.06	1.81	1.87	1.62	.452	.405	.434	.434
26	(11) 140GK	T,B,Ind,Tr	6-4 1/2x5 1/2	155-2250	125-1800	525.0	6.15	420-1000 (BE)	W	In	I	Sil	2.12	1.56	1.87	1.37	.531	.434	.434	.434
27	▾▾(11) 140GKB	T,B,Tr	6-4 1/2x5 1/2	177-2600	135-2000	525.0	6.40	426-800 (BE)	W	In	I	Sil	2.12	1.56	1.87	1.37	.540	.540	.437	.437
28	(11) 140GZ	T,B,Tr	6-4 5/8x5 1/2	170-2250	135-1800	554.0	6.40	453-800 (BE)	W	In	...	Sil	2.12	1.56	1.87	1.37	.524	.524	.437	.437
29	▾▾(11) 140GZB	T,B,Tr	6-4 5/8x5 1/2	188-2600	143-2000	554.0	6.40	453-800 (BE)	W	In	I	Sil	2.12	1.56	1.87	1.37	.524	.524	.437	.437
30	(11) 145GK	T,B,Ind,Tr	6-5 1/4x6	216-2000	156-1600	779.0	6.20	595-1000 (BE)	W	In	I	Sil	2.37	1.84	2.12	1.62	.594	.531	.500	.500
31	▾▾(11) 145GKB	T,B,Tr	6-5 1/4x6	240-2400	178-2000	779.0	6.20	595-1000 (BE)	W	In	I	Sil	2.56	2.03	2.31	1.81	.600	.600	.500	.500
32	▾▾(11) 145GZB	T,B,Tr	6-5 3/8x6	250-2400	185-2000	817.0	6.00	630-1100 (BE)	W	In	I	Sil	2.37	1.84	2.12	1.62	.594	.531	.497	.496
33	(12) WAK	T,Tr,Ind	6-6 1/4x6 1/2	222-1600	206-1500	1197.0	5.20	892-900 (BE)	W	In	I	Sil	2.65	2.22	2.37	2.00	.656	.656	.500	.500
34	▾▾(11) WAKB	T,Tr,Ind	6-6 1/4x6 1/2	280-1800	255-1800	1197.0	5.20	1000-1000 (BE)	W	In	I	Sil	2.65	2.22	2.37	2.00	.656	.656	.500	.500
35	135GK	T,B,Tr,M,Ind	6-4 1/4x5	134-2400	112-2000	426.0	6.25	325-1200 (BE)	D	In	I	Sil	2.06	1.81	...	...	.371	.350	.435	.434
36	135GZ	T,B,Tr,M,Ind	6-4 3/8x5	143-2400	118-2000	451.0	6.30	348-1200 (BE)	N	In	I	Sil	2.06	1.81	...	...	.371	.350	.435	.434
37	▴▾(12) NKRB	Ind	6-7x8 1/4	316-1150	276-1050	1905.0	6.50	1520-800 (BE)	W	In	I	Sil	3.22	2.78	2.87	2.50	.709	.709	.620	.619
38	▴(12) LRORB	Ind	6-8 1/2x8 1/2	432-1100	405-1000	2894.0	6.60	2260-800 (BE)	W	Se	I	Sil	3.50	3.00	3.25	2.75	.750	.840	.562	.562
39	▴(12) LRZB	Ind	6-9 3/8x8 1/2	515-1200	482-1100	3520.0	6.10	2775-600 (BE)	W	Se	I	Sil	4.19	3.41	3.62	3.12	.770	.696	.681	.681
40	VLROB	Ind	12-8 1/2x8 1/2	900-1200	867-1200	5788.0	6.75	4530-800 (BE)	W	In	I	Sil	...	...	...	...	...	...	...	...
41	Willys L4-134	C,Ind	4-3 1/8x4 3/8	60-4000	...	134.2	6.48	105-2000 (BE)	N	In	L	CHS	1.53	1.47	1.34	1.28	.351	.351	.373	.372
42	F4-134	C,T,Ind	4-3 1/8x4 3/8	72-4000	...	134.2	6.90	114-2000 (BE)	N	In	F	(o)	2.00	1.47	1.84	1.28	.260	.351	.374	.372
43	L6-226	C,T	6-3 5/16x4 3/8	105-3600	...	226.2	6.86	190-1400 (BE)	N	In	L	Sil	1.52	1.33	1.38	1.19	.284	.284	.341	.339
44	4-53	T	4-2 3/4x2 1/4	16-3600	16-3600	53.5	6.50	30-2250 (BE)	D	In	I	CNS	1.13	1.13	1.00	1.00	.217	.217	.279	.279
45	Wisconsin VE-4	Tr,Ind	4-3x3 1/4	21.5-2400	21.5-2400	91.9	5.44	50-1700 (EA)	N	Se	L	Aus	1.31	1.31	1.12	1.12	.275	.275	.309	.309
46	VF-4	Tr,Ind	4-3 1/4x3 1/4	25-2400	25-2400	107.7	5.07	57-1700 (EA)	N	Se	L	Aus	1.31	1.31	1.12	1.12	.275	.275	.309	.309
47	VH-4	Ind	4-3 1/4x3 1/4	30-2800	30-2800	107.7	5.50	66-1700 (BE)	N	Se	L	Aus	1.31	1.31	1.12	1.12	.275	.275	.309	.309
48	VG4D	Ind	4-3 1/2x4	37-2400	37-2400	154.0	5.05	94-1500 (EA)	N	Se	L	St	1.56	1.56	1.37	1.37	.275	.275	.309	.309
49	VR4D	Ind	4-4 1/4x4 1/2	56.5-2200	56.5-2200	255.0	5.30	161-1300 (BE)	N	Se	L	St	2.00	2.00	1.81	1.81	.340	.340	.373	.373
50	Witte 98	Ind	1-5x5	12-1200	11.8-1200	98.2	5.60	52-1200 (BE)	W	In	I	Fec	2.13	2.13	1.88	1.88	.322	.322	.372	.372
51	C	Ind	1-6x8	19.8-750	19.4-750	226.0	5.00	139-750 (BE)	W	In	F	Fec	2.56	2.56	2.25	2.25	.531	.531	.434	.434

ABBREVIATIONS

°—Stellite faced.
•—Weight complete with ignition and carburetor.
••—Intake, Moly Iron; exhaust, Stellite Steel.
♦—With rotators.
■—Also available in reduction gear models.
▾—Also available in R.H. rotation.
▾▾—High output.
‡—Tocco hardened.
‡‡—Forked 23.7 oz.—Blade 22.4 oz.
†—Weight per pair.
§—4 Rings used on Trucks and 5 on Coaches.
§§—5.20 for gasoline—6.00 for natural gas or butane.
#—Dual throat.
##—Cast Iron 315, Aluminum 250 lbs.
‡—Super-Charged engine.
○○—Weight of piston only.
▴—Liquid petroleum gas engine.
♠—Intake, Steel; exhaust, Stellite Steel.
‡‡—Four barrel carburetor.
‡—Natural gas engine.
(2)—Two used.
(3)—Three used.
(4)—Four used.
(7)—Roller bearings.
(11)—Automotive power ratings.
(12)—Industrial power ratings.
(14)—Unilay Type 307 head, 3140 steel stem.
(a)—Main bearings.
(b)—Wristpins.
(c)—Connecting rods.
(d)—Camshaft.
(e)—Accessory drive.
(f)—Valve lifters or rocker arms and shafts.
(g)—Timing gears or chain.
(h)—Intake 30, Exhaust 45.
(i)—Cylinder walls.
(j)—Timken Cone 14138A, Cup 14276.
(k)—Intake 30, Exhaust 44.
(l)—Intake, 30; exhaust, 45.
(m)—Intake, 45; exhaust, 46.
(n)—Intake, 45; exhaust, 44.
(o)—Uniloy 21-12 (Type 307) with valve rotators on 473.
(p)—Hydraulic valve lifters and cylinder walls.
(q)—Tocco hardened journals on VT-346 and VTX-346 models.
(r)—Reverse gear.
(s)—Fan drive gear.
(t)—Tappets and valve mechanism.
(u)—Complete with SAE housing.
(v)—Intake, 45; exhaust, 43.
(x)—Sodium cooled.
(y)—Stellite faced, sodium cooled.
(z)—Intake 30, Exhaust 29.
A—Alloy.
AC—Aluminum or cast iron.
AI—Alloy Iron.
Al—Aluminum alloy.
Ala—Aluminum alloy, anodized.
Alb—Aluminum bronze.
Alg—Algas
Als—Aluminum alloy with steel strut.
Alst—Aluminum alloy with steel strut, tin plated.
Alt—Aluminum alloy (Tin coated).
AS—Alloy steel.
Ata—Aluminum alloy, tin plated and anodized.
Atn—Aluminum alloy, tinplated and knurled.
Aus—Austenitic steel.
B—Buses.
Ba—Ball bearing.
BB—Ball & Ball.

For Directory of the Engine Manufacturers listed above, see Table of Contents

TRACTOR, MARINE, OR INDUSTRIAL USE—*concluded*

VALVES				PISTONS				CONNECTING RODS			CRANKSHAFT							CARBURETOR			OVERALL DIMENSIONS (In.)				
Seats													Crank-Pin	MAIN BEARINGS											
															Diameter and Length (In.)										
Angle (Deg.)	Inserts Used?	Insert Material (S.A.E. No.)	Camshaft Drive—Type	Material	Weight with Pins, Rings, Bushings (Oz.)	Piston Pin—Diameter and Length (In.)	Number of Rings per Piston	Material	Center to Center Length (In.)	Weight with Bushing and Cap (Oz.)	Material	Counter Balance Used	Diameter and Length (In.)	Number	Front	Rear	Oil Pressure to—	Make	Size	Engine Weight without Carburetor or Ignition (Lb.)	Width	Height	Length	Clutch Housing (S.A.E. Nos.)	Line Number
45	N	......	HG	Alt	15.3	.750x2.63	3	C1041	6 3/8	19	C1046	Y	1.81x.875	4	3.06x1.03	3.06x1.50	acdf	Car	1 1/4	468	20 1/2	27	29 5/8	......	1
45	N	......	HG	Alt	21.6	.875x2.87	3	C1041	7 11/16	33.1	C1046	Y	2.19x1.13	4	2.88x1.09	2.88x1.78	acdf	Car	1 1/4	625	21 1/4	29	33 3/16	......	2
45	N	......	HG	Alt	23.5	.875x3.06	3	C1141	6 5/8	23.7	C1046	Y	2.00x.813	5	2.50x1.00	2.50x1.52	acdf	Str	1 1/4	710*	25 1/4	28 1/4	29 5/8	......	3
45	N	......	HG	Alt	23.5	.875x3.06	3	C1141	6 5/8	23.7	C1046	Y	2.00x.813	5	2.50x1.00	2.50x1.52	acdf	Str	1 1/4	725	25 1/4	28 1/4	29 5/8	......	4
45	N	......	HG	Al	15.3	.750x2.56	4	CS	7 1/4	26	CS	Y	1.75x1.37	2	1.75x1.87	1.75x2.00	acdg	Zen	7/8	300	20 1/16	22 5/8	28 1/8	......	5
45	N	......	HG	Al	......	.688x2.16	3	CS	6	......	CS	Y	1.56x1.23	2	1.99x1.62	1.99x1.25	acdgr	Zen	7/8	280	17 1/4	19	26 3/4	......	6
45	N	......	HG	Al	......	.688x2.16	3	CS	6	......	CS	Y	1.56x1.23	2	1.99x1.62	1.99x1.25	acdgr	Zen	7/8	348	17 1/4	19	35 11/16	......	7
45	N	......	HG	Cl	19	.625x2.44	3	CS	7 1/2	22	CS	N	1.50x1.75	2	1.50x2.75	1.50x2.75	acdg	Zen	1	347	17 5/16	21 1/16	34 11/16	......	8
30	N	......	HG	Al	29.5	.75x2.81	3	3140	6 5/16	21.0	4140	......	1.75x1.12	3	2.00x1.56	2.00x1.56	acdg	Zen	1 1/4	......	24 1/8	21 3/4	31 11/16	......	9
30	N	......	HG	Al	29.5	.750x2.81	3	3140	6 5/16	21.0	4140	......	1.75x1.12	3	2.00x1.56	2.00x1.56	acdg	Zen	1 1/4	499	24 1/8	21 3/4	40 3/4	......	10
45	N	......	HG	Al	20	.875x2.75	4	Al	8 1/2	30	CS	N	2.00x1.75	3	2.00x2.50	2.00x2.50	acd	Zen	1 1/4	524	18 1/2	25 1/4	39 5/8	......	11
30	N	......	HG	Alt	26	.875x2.92	3	1035	7	26	1046‡	N	2.00x1.25	7	2.50x1.31	2.50x1.93	acdgr	Zen	1 1/2	684*	24 1/8	23 5/8	40 5/8	......	12
30	N	......	HG	Alt	26	875x2.92	3	1035	7	26	1046‡	Y	2.00x1.25	7	2.50x1.31	2.50x1.93	acgr	Zen	1 1/2	698*	24 1/8	23 5/8	40 5/8	......	13
30	N	......	HG	Alt	......	1.12x3.44	4	1035	8	39.2	1046‡	Y	2.00x1.50	7	2.50x1.12	2.50x1.31	acr	Zen	1 3/4	840	25	25 3/16	45 3/8	......	14
30	N	......	HG	Alt	......	1.12x3.44	4	1035	8	39.2	1046‡	Y	2.00x1.50	7	2.50x2.12	2.50x1.31	acr	Zen	......	840	25	25 3/16	45 3/8	......	15
45	N	......	HG	Al	......	.625x2.12	4	1045	6	14	1045	N	1.56x1.25	2	ND1207	ND1207	ad	Op	5/8	195	14 11/16	20 1/2	21 11/16	6	16
45	E	CA	HG	Cl	......	.875x2.75	3	1045	7 1/4	29	1045	N	1.75x1.06	3	2.12x1.18	2.12x1.43	abcdg	Op	3/4	290	19	29 3/16	27 3/4	5	17
44 1/2	N	......	HG	Al	......	1.25x2.75	4	1045	6 3/4	31 1/2	1045	Y	2.25x1.38	3	2.25x1.63	2.25x1.63	acdg	Op	1	450	19	27 3/4	30 7/8	4	18
45	E	CA	HG	Cl	......	1.12x3.03	4	1045	8 3/4	46	1045	N	2.00x1.50	3	2.00x1.88	2.00x2.50	abcdg	Op	1	385	19	26 3/4	32 7/8	5	19
45	N	......	HG	Al	......	1.25x2.75	4	1045	6 3/4	......	1045	Y	2.00x1.38	4	2.25x1.63	2.25x1.63	abcdfg	Op	1	740	22	29	40 3/4	3	20
44 1/2	N	......	HG	Al	......	1.25x3.00	4	1045	6 3/4	......	1045	N	2.25x1.37	4	2.63x1.88	2.63x1.75	abcdfg	Op	1	690	22	29	42 5/8	3	21
44 1/2	E	CA	HG	Al	......	1.25x3.43	4	1045	6 3/4	......	1045	N	2.62x1.38	4	2.63x1.88	2.63x1.75	abcdfg	Op	1 3/4	800	22	30 1/4	43	3	22
44 1/2	E	CA	HG	Al	......	1.25x3.44	4	1045	6 3/4	47 1/4	1045	Y	2.62x1.38	4	2.63x1.88	2.63x1.75	abcdfg	Op	1 3/4	775	26	30 1/4	43 7/8	3	23
44 1/2	E	St	HG	Al	......	1.50x3.63	4	1045	9 1/2	......	1045	Y	3.00x1.62	7	3.25x1.90	3.25x2.50	abcdfg	Op	1 3/4	1325	26	37 1/2	46 7/16	3	24
45	E	St	HG	Al	......	1.50x3.62	4	1045	9 1/2	......	1045	Y	3.00x1.62	7	3.25x1.90	3.25x2.50	abcdfg	Op	1 3/4	1325	26	37 1/2	48 7/16	3	25
(h)	E	CA	HG	Al	......	1.37x3.87	5	1045	10 1/4	85	1045	N	2.62x2.00	7	3.25x1.59	3.25x3.00	abcdfg	Op	1 3/4	1390	23 5/8	41 3/4	50 3/8	3	26
(h)	E	St	HG	Al	......	1.37x3.87	4	1045	10 1/4	85	C1046	Y	2.62x2.00	7	3.25x1.59	3.25x3.00	abcdfg	Op	1 3/4	1495	23 5/8	41 3/4	50 3/8	3	27
(h)	E	CA	HG	Al	......	1.37x3.87	4	1045	10 1/4	85	1045	N	2.62x2.00	7	3.25x1.59	3.25x3.00	abcdfg	Op	1 3/4	1390	23 5/8	41 3/4	50 3/8	3	28
(h)	E	St	HG	Al	......	1.38x3.88	4	1045	10 1/4	85	C1046	Y	2.62x2.00	7	3.25x1.59	3.25x3.00	abcdfg	Op	1 3/4	1390	23 5/8	41 3/4	50 3/8	3	29
(h)	E	CA	HG	Al	......	1.62x4.87	5	1045	11 3/4	133	1045	N	3.00x2.25	7	3.50x2.00	3.50x3.50	abcdfg	Op	2	1810	25 3/4	47 9/16	55 1/4	2	30
(h)	E	St	HG	Al	......	1.62x4.87	4	1045	11 3/4	133	C1046	Y	3.00x2.25	7	3.50x2.00	3.50x3.50	abcdfg	Op	2	1810	25 3/4	46 3/8	57 1/8	2	31
(h)	E	St	HG	Al	......	1.62x4.50	4	1045	11 3/4	133	1045	Y	3.00x2.25	7	3.50x2.00	3.50x3.50	abcdfg	Op	2	1810	25 3/4	46 3/8	57 1/8	2	32
(h)	E	CA	HG	Cl	......	1.87x5.50	4	1045	13 1/4	195	1045	N	3.37x2.37	7	4.00x2.19	4.00x3.25	abcdfg	Op	2	3050	30 5/8	50 7/8	65 5/8	0	33
(h)	E	St	HG	Al	......	1.87x5.50	4	1045	13 1/4	195	1045	Y	3.37x2.37	7	4.00x2.19	4.00x3.25	abcdfg	Op	2	3050	30 5/8	50 7/8	65 5/8	0	34
45	E	St	HG	Al	......	1.50x3.63	4	1045	9 1/2	......	1045	......	3.00x1.62	7	3.25x1.91	3.25x2.50	abcdfg	Op	1 3/4	1325	26	37 1/2	46 7/16	3	35
45	E	St	HG	Al	......	1.50x3.63	4	1045	9 1/2	......	1045	......	3.00x1.62	7	3.25x1.90	3.25x2.50	abcdfg	Op	1 3/4	1325	26	37 1/2	48 7/16	3	36
(h)	E	CA	HG	Cl	......	2.50x6.03	4	1045	15 3/8	......	1045	Y	4.37x2.75	7	5.25x3.44	5.25x5.56	abcdfg	Op	2 1/2	5900	42	60 11/16	82 1/8	00	37
30	E	CA	HG	Cl	......	2.25x7.75	5	1045	18 3/8	474	1045	Y	4.00x3.75	7	4.25x4.81	4.25x5.50	abcdfg	Op	2 1/2	9940	48 1/2	65	95 1/8	00	38
(h)	E	CA	HG	Cl	......	3.00x8.25	5	1045	21 5/8	......	1045	Y	5.00x3.75	7	5.50x4.75	5.50x5.50	abcdfg	Op	4	11250	48 1/2	72	98 3/8	00	39
......	Bo	St	HG	Al	......	3.00x7.00	5	4145	18	......	1046	......	5.75x3.06	7	6.25x4.75	6.25x4.75	abcdefg	......	4	15000	67	75 1/2	130	00	40
45	E	Eat	HG	Alt	19	.812x2.78	3	1141	9 5/16	32.0	1040	Y	1.94x1.31	3	2.33x1.64	2.33x1.66	acdg	Car	1 1/2	344	19	26 3/16	28 1/4	5	41
45	E	Eat	HG	Alt	19	.812x2.78	3	1141	9 5/16	32.0	1040	Y	1.94x1.31	3	2.33x1.64	2.33x1.66	acdfg	Car	1 1/2	390	19 1/2	30 1/4	26	5	42
(h)	E	Eat	Ch	Alt	20.9	.859x2.78	4	1035	7	29.6	1045	......	2.06x1.53	4	2.38x1.06	2.38x1.32	acdg	Car	1 11/16	558^	25 5/8	33	40 1/8	......	43
45	Bo	Nir	Ch	Alt	36.0	.625x2.46	3	1030	3 13/16	14.2	4140	......	1.25x.875	2	1.50x1.03	2.25x1.19	acdf	Til	1 1/8	128	20	15	22	......	44
45	Bo	MI	HG	Al	14.6	.750x2.56	4	1035	8 3/8	22	1045	N	1.75x1.12	2	Timken	Timken	PJ	Zen	7/8	295*	21 1/2	28 7/8	25 3/8	......	45
45	Bo	MI	HG	Al	16.1	.750x2.56	4	1035	8 3/8	22	1045	N	1.75x1.12	2	Timken	Timken	PJ	Zen	7/8	295*	21 1/2	26 7/8	25 3/8	......	46
45	Bo	MI	HG	Al	16.0	.750x2.55	4	1035	8 3/8	20.5	1045	Y	1.88x1.13	2	Timken	Timken	PJ	MaS	7/8	310*	21 1/2	27 1/2	25 3/8	......	47
45	Bo	**	HG	Al	22.5	.937x2.75	4	1035	8 3/8	30.7	1045	Y	2.13x1.31	2	Timken	Timken	PJ	MaS	1	410*	24	29	28 1/8	......	48
45	Bo	**	HG	Al	36.0	1.25x3.40	4	1035	9 1/2	47.6	1045	Y	2.75x1.38	2	Timken	Timken	PJ	Zen	1 1/4	775*	28	37 11/16	31 5/8	......	49
45	Bo	HFA	G	Al	94.1	1.50x4.38	4	1035	10	102.5	1046	......	2.25x2.38	2	TRB	TRB	Splash	Til	1	655	31 1/2	35 11/16	33 7/16	6	50
45	Bo	HFA	SG	Cl	37.8	1.81x5.09	6	1035	18	292	1045	......	2.88x3.00	2	2.50x....	2.50x....	f	Own	1 7/8	1610	44 3/16	48 5/8	56 1/4	5	51

BE—Bare engine.
Ben—Bendix.
Bo—Used in both intake and exhaust seats.
C—Cars.
CA—Cast alloy.
CAI—Cast alloy iron.
Car—Carter Carburetor Corp.
Cen—Century.
Ch—Chain.
CHS—Chrome nickel silicon steel.
CI—Cast iron.
CMS—Carbon manganese steel.
CMT—Chromium tungsten steel.
CNS—Chrome nickel steel.
C-R—Carter or Rochester.
CS—Carbon steel.
C-Z—Carter or Zenith.
D—Dry liners.
DC—Durachrome castings.
DFS—Drop forged steel.
Duc—Durachrome.
Dur—Duraluminum.
E—Used on exhaust valve seats.
EA—Engine with standard accessories.
Eat—Eatonite.
Ens—Ensign.
E-S—Eatonite or stellite steel.
F—F-head.
Fe—Ferchrome.
G—Gear.
GP—General purpose.
HAS—High alloy steel.
HC—Helical gear and chain.
HFA—Hard facing alloy.
HG—Helical gear.
HMS—High manganese steel.
Hol—Holley Carburetor Co.
Hyd—Hydraulic valve lifters
I—In head (Valves)
In—Integral.
Ind—Industrial.
L—Valves at side (L-Head).
M—Marine.
MA—Manganese alloy.
MaS—Marvel-Schebler Carburetor Div.
MCS—Molybdenum chrome steel.
MI—Moly Iron.
MS—Manganese steel.
M-Z—Marvel-Schebler or Zenith.
N—No or none.
NI—Nodular iron.
Nif—Nifferrite.
Nir—Ni-Resist.
NS—Nickel steel.
Op—Optional.
PJ—Pump jet.
RB—Roller bearing.
R-P—Rochester Products.
SA—Special alloy.
SAC—Super alloy casting.
Se—Separate.
SF—Steel forging.
SG—Spur gear.
Sil—Silichrome steel.
Sim—Simmons fuel injection.
Spec—Special.
SS—Semi-steel.
St—Stellite steel.
Ste—Steel.
Str—Stromberg-Elmira Div.
T-12—Thompson Products No. 12.
T—Trucks.
TA—Tungsten alloy.
TCA—Tungsten cobalt alloy.
Til—Tillotson Mfg. Co.
TP—Thompson Products.
Tr—Tractors.
TRB—Tapered roller bearings.
W—Wet liners.
WM—Wausau cast Moly No. 1.
Y—Yes.
Zen—Zenith Carburetor Div.

For Directory of the Engine Manufacturers listed above, see Table of Contents

DIESEL ENGINES . . . 1959

TRUCKS • BUSES • TRACTORS

Line Number	Engine Make and Model	Built Under License from	General: Designed for	Type	Number of Cylinders Bore and Stroke (in.)	Cylinder Liners—Type	Cycle	Piston Displacement (Cu. In.)	With Bare Engine: Maximum Brake Hp. at Specified R.P.M.	With Standard Accessories: Max. Intermittent Hp. at Specified R.P.M.	With Standard Accessories: Continuous Sustained Hp. at Specified R.P.M.	Compression Ratio—to 1	Max. Combustion Pressure (Lb. per Sq. In.)	B.M.E.P. at Continuous Hp. (Lb. per Sq. In.)	Weight per Continuous Hp. (Lb.)	Max. Torque in Lb. Ft. at Specified R.P.M.	Shipping Weight (Lb.): Automotive or Industrial	Shipping Weight (Lb.): Marine	Valves: Arrangement	Valves: Intake Port Diameter and Lift (In.)
1	Allis-Chalmers 6DA-273	Own	I	EC	6-3¾x4⅛	N	4	273	74-2100	58-2000	51-2000	14.20	825	74.0	16.3	204-1400	830		VI	1.53-.439
2	6DCB-1879	Own	R,I	EC	6-6¾x8¾	W	4	1879	282-1300	232-1200	208-1200	13.00	725	73.1	33.4	1400-800	6950		VI	2.50-.687
3	6DCS-1879	Own	I	EC	6-6¾x8¾	W	4	1879	340-1300	290-1200	265-1200		725	93.1		1580-700			VI	2.50-.687
4	8DC-2505	Own	I	EC	8-6¾x8¾	W	4	2505	388-1300	312-1200	265-1200	13.00	825	69.8	37.0	1900-800	9800		VI	2.50-.687
5	8DCS-2505	Own	I	EC	8-6¾x8¾	W	4	2505	516-1300	400-1200	350-1200	13.00	875	92.2	30.0	2390-800	10500		VI	2.50-.687
6	6DAMR-273	Own	M	EC	6-3¾x4⅛	N	4	273		85-2800	57-2000	14.20	825	82.7		204-1400			VI	1.53-.439
7	6DCBMR-1879	Own	M	EC	6-6¾x8¾	W	4	1879		262-1200	235-1200	13.00	725	82.5		1400-800			VI	2.50-.687
8	8DCMR-2505	Own	M	EC	8-6¾x8¾	W	4	2505		350-1200	306-1200	13.00	825	80.6	40.4	1900-800		12350	VI	2.50-.687
9	8DCSMR-2505	Own	M	EC	8-6¾x8¾	W	4	2505		445-1200	400-1200	13.00	875	105.4	32.5	2390-800		13000	VI	2.50-.687
10	D-344	Own	I	TC	4-4 7/16x5 9/16	W	4	344	88-1800	68-1800	64-1800	14.90		82.2		280-1000			VI	1.69-.429
11	D-516	Own	I	TC	6-4 7/16x5 9/16	W	4	516	131.5-1800	106-1800	90.5-1800	14.45		77.1		402-1200			VI	1.69-.429
12	4BD-153	Lanova	Tr	DI	4-3 7/16x4⅛	W	4	153	40-2400	35-2400	27-2000	15.30	725	70.0	28.1	104-1400	760		VI	1.38-.429
13	6BD-230	Lanova	Tr	DI	6-3 7/16x4⅛	W	4	230	60-2400	52-2400	40-1800	15.30	725	76.0	21.5	156-1400	860		VI	1.38-.429
14	D-262	Own	Tr	DI	6-3 9/16x4⅜	W	4	262	62-1650			15.30				212-1300			HI	1.25-
15	D-273	Own	M	DI	6-3¾x4⅛	N	4	273	74-2000	57-2000	51-2000	14.50		74.0	13.7	188-1300		700	VI	1.53-.440
16	ADS-516	Own	B	DI	6-4 7/16x5 9/16	W	4	516	120-1600			14.20				440-1200	2130		VI	1.69-.466
17	TDS-516	Own	Tr	DI	6-4 7/16x5 9/16	W	4	516	155-2200			13.80				430-1600	2445		VI	1.69-.466
18	TDS-844	Own	B	DI	6-5¼x6½	W	4	844	220-1950			13.30	415			653-1550	2995		VI	2.00-.580
19	16000	Own	Tr,M,I	DI	6-5¼x6½	W	4	844	230-2000	190-1800	170-1800	14.50	470	88.0	17.8♦	640-1400	3050	3950	VI	1.38-.544
20	21000	Own	Tr,M,I	DI	6-5¼x6½	W	4	844	340-1800	265-1800	225-1800	14.50	470	112.0	14.1♦	925-1400	3165	4085	VI	1.38-.544
21	Atlas 35-S-4	Own	I,M	DI	4-6½x8¼	W	4	1099			300-1225	14.60		78	20.0♦		6000	10900	VI	2.44-
22	35-S-6	Own	I,M,R	DI	6-6½x8¼	W	4	1643			300-1225	14.60		78	25.0♦		8500	10900	VI	2.44-
23	35-SX-6	Own	I,M,R	DI	6-6½x8¼	W	4	1643			300-1225	13.15		120	30.0♦		9000	10900	VI	2.44-
24	45		I,M	DI	4-9x10½	W	4	2672			192-750	14.00	850	76	68.0♦		13000	15100	HI	3.25-.875
25	45		I,M	DI	5-9x10½	W	4	3340			242-750	14.00	850	76	58.0♦		14000	16100	HI	3.25-.875
26	45		I,M	DI	6-9x10½	W	4	4008			290-750	14.00	850	76	59.0♦		17100	20000	HI	3.25-.875
27	*45		I,M	DI	6-9x10½	W	4	4008			435-750	13.00	900	115	42.5♦		18500	20800	HI	3.25-.875
28	45		I,M	DI	8-9x10½	W	4	5344			385-750	14.00	850	76	56.1♦		21600	24500	HI	3.25-.875
29	*45		I,M	DI	8-9x10½	W	4	5344			580-750	13.00	900	115	39.3♦		22800	25600	HI	3.25-.875
30	Caterpillar D311H	Own	Tr,M,I	PC	4-4x5	W	4	252	75-2400	63-2400	47-2000	18.00	950	79	25.7	165-1600	1228	1580	VI	1.50-.429
31	D315	Own	Tr,M,I	PC	4-4½x5½	W	4	350	92-2000	71-2000	54-1800	18.00	940	78	40.7	238-1200	2200	2710	VI	1.75-.436
32	D315G(T)	Own	I	PC	4-4½x5½	W	4	350	115-2000	100-2000	75-1800	18.00	1150	101	26.5	315-1400	1985		VI	1.75-.436
33	D318	Own	Tr,M,I	PC	6-4½x5½	W	4	525	137-2000	107-2000	81-1800	18.00	940	75	36.2	350-1200	2935	3385	VI	1.75-.436
34	D318G(T)	Own	I	PC	6-4½x5½	W	4	525	175-2000	150-2000	113-1800	18.00	1350	101	21.8	472-1400	2450		VI	1.75-.436
35	D326F	Own	Tr,M,I	PC	6-5⅛x6½	W	4	805	200-2000	177-2000	132-1800	17.25	900	75	27.0	604-1200	3550	4470	VI	1.88-.495
36	D337F	Own	Tr,M,I,R	PC	6-5⅛x6½	W	4	805	310-2000	265-2000	181-1800	17.25	1200	102	20.5	815-1400	3700	4830	VI	1.88-.495
37	D339	Own	Tr,M,I	PC	4-5¾x8	W	4	831	140-1200	119-1200	93-1200	15.70	720	79	40.9	600-800	3800	4760	VI	2.06-.588
38	D342C(NA)	Own	Tr,M,I	PC	6-5¾x8	W	4	1246		193-1300	147-1200	15.70	720	80	35.1	905-800	5140	6400	VI	2.06-.588
39	D342C(T)	Own	Tr,M,I	PC	6-5¾x8	W	4	1246	320-1300	246-1300	209-1200	15.70		116	26.0		5440	6700	VI	2.06-.588
40	D342C(SI)	Own	I		6-5¾x8	W	4	1246			214-1200	10.00		119	24.0		5140		VI	2.06-.588
41	D353C	Own	Tr,M,I,R	PC	6-6¼x8	W	4	1473	390-1300	320-1300	274-1200	15.30	1170	130	22.7	1600-900	6230	8625	VI	2.28-.579
42	D375D(NA)	Own	M,I,R	PC	8-5¾x8	W	4	1662		254-1300	220-1200	16.00	750	95	37.0	1220-900	8150	10785	VI	2.06-.588
43	D375D(RB)	Own	M,I,R	PC	8-5¾x8	W	4	1662		329-1300	284-1200	16.00	1000	120	30.3	1625-800	8600	11235	VI	2.06-.588
44	D375D(T)	Own	M,I,R	PC	8-5¾x8	W	4	1662	430-1300	362-1300	307-1200	16.00	1150	129	28.2	1860-850	8650	11285	VI	2.06-.588
45	D375D(SI)	Own	I		8-5¾x8	W	4	1662			282-1200	10.00		119	28.9	1350-700	8150		VI	2.06-.588
46	D397D(NA)	Own	M,I,R	PC	12-5¾x8	W	4	2493		388-1300	339-1200	16.00	750	95	31.8	1865-800	10700	15850	VI	2.06-.588
47	D397D(RB)	Own	M,I,R	PC	12-5¾x8	W	4	2493		493-1300	429-1200	16.00	1000	119	26.1	2400-800	11200	16350	VI	2.06-.588
48	D397D(T)	Own	M,I,R	PC	12-5¾x8	W	4	2493	650-1300	548-1300	479-1200	16.00	1150	132	23.5	2640-900	11250	16400	VI	2.06-.588
49	D397D(SI)	Own	I		12-5¾x8	W	4	2493			429-1200	10.00		119	24.9	2030-700	10700		VI	2.06-.588
50	Carlist 3		Cr,T,B,Tr,M,I	PC	3-4x4½	W		170	96-3000	75-3000	72-2600	22.00	1280	65	8.5	170-	615		N	
51	Continental GD-157	Own	I,M	TC	4-3⅜x4⅜	W	4	157	39-2000			15.5				113-1200	605		VI	1.18-.375
52	HD-243	Own	I	TC	4-3¾x5½	W	4	243	64-2000			15				178-1200	840		VI	1.37-.325
53	HD-260	Own	I	TC	4-3⅞x5½	W	4	260	74-2400			15				188-1100	840		VI	1.37-.325
54	TD-427	Own	I	TC	6-4 7/16x4⅝	N	4	427	132-2200			14.5				310-1200	1300		VI	1.71-.437
55	RD-572	Own	I,M	TC	6-4¾x5⅜	D	4	572	154-2000			14.5				428-1300	1845		VI	1.87-.546
56	TD-8427	Own	T,B,Tr	TC	6-4 7/16x4⅝	N	4	427	147-2600			14.5				307-1200	1270		VI	1.71-.437
57	RD-8572	Own	T,B,Tr	TC	6-4¾x5⅜	D	4	572	172-2400			14.5				428-1300	1785		VI	1.87-.546
58	SD-802	Own	I	TC	6-5⅜x5⅞	D	4	802	202-1800			14.7				620-1200			VI	2.19-.552
59	SD-6802	Own	T,B	TC	6-5⅜x5⅞	D	4	802	225-2200			14.7				620-1300			VI	2.19-.552
60	ED-201	Own	I	TC	4-3⅝x4⅞	W	4	201	45.5-2000			15				145-1100			VI	1.44-.350
61	JD-382	Own	I	TC	4-4½x6	W	4	382	87-2000			14.5				276-1000			VI	1.56-.408
62	VD-603	Own	I	TC	8-4½x4¾	N		602	197-2600			15.80				469-1300			VI	1.94-.567
63	VD-8603	Own	T,B	TC	8-4½x4¾	N	4	603	200-2800			15.80				469-1300	1696		VI	1.94-.567
64	ZD-129	Own	I	TC	4-3¼x3⅞	W		129	34-2000			16.25				95-1200			VI	1.13-.352
65	HD-277	Own	I	TC	4-4x5½	W		277	79-2400			15.30				202-1100			VI	1.38-.325
66	GD-193	Own	I	TC	4-3¾x4⅜	W	4	193	56-2250				1850			154-1200			VI	1.28-.381
67	ED-208	Own	I	TC	4-3 11/16x4⅞	W	4	208	62-2200			15.50	1850			145-1100			VI	1.44-.350
68	Cummins J-4	Own	Tr,I	DI	4-4⅛x5	W	4	267	75-2200	63-2200	52-2000	15.70		78	22.1	198-1300	1150		VI	1.38-.406
69	J-6	Own	T,B,Tr,M,I,R	DI	6-4⅛x5	W	4	401	100-1800	85-1800	75-1800	15.70		78	21.1	305-1450	1505	1830	VI	1.38-.406
70	JF-6	Own	T,B,Tr,M,I,R	DI	6-4⅛x5	W	4	401	110-2200	93-2200	79-2000	15.70		83	20.2	305-1450	1545	1880	VI	1.38-.406
71	JN-6	Own	T,B,Tr,M,I,R	DI	6-4⅛x5	W	4	401	130-2500	102-2200	90-2200	16.30		78	17.9	295-1800	1555	1900	VI	1.16-.406
72	JS-6	Own	T,B,Tr,M,I,R	DI	6-4⅛x5	W	4	401	160-2500	125-2200	110-2200	13.00		94	15.2	375-1700	1600	1970	VI	1.38-.406
73	JNS-6	Own	T,B,Tr,M,I,R	DI	6-4⅛x5	W	4	401	175-2500	140-2200	122-2200	15.50		103	14.0	407-1750	1610	2000	VI	1.16-.406
74	JT-6	Own	T,B,Tr,M,I,R	DI	6-4⅛x5	W	4	401	175-2500	137-2200	121-2200	16.30		108	13.4	407-1750	1615	1950	VI	1.16-.406
75	HR-4	Own	T,B,Tr,M,I,R	DI	4-5⅛x6	W	4	495	115-1800	97-1800	85-1800	15.50		74	21.5	375-1200	1765	1980	VI	1.75-.500
76	HRC-4	Own	T,B,Tr,M,R,I	DI	4-5⅛x6	W	4	495	115-1800	97-1800	85-1800	15.50		74	20.6	375-1200	1755	1920	VI	1.75-.500
77	NHC-4	Own	T,B,Tr,M,R,I	DI	4-5⅛x6	W	4	495	130-2000	110-2000	93-1800	15.50		80	19.5	403-1200	1815	2090	VI	1.56-.420
78	NT-4	Own	T,B,Tr,M,I,R	DI	4-5⅛x6	W	4	495	165-2000	140-2000	117-1800	15.50		104	16.0	475-1400	1875	2025	VI	1.56-.420
79	H-6	Own	T,B,Tr,M,R,I	DI	6-4⅞x6	W	4	672	160-1800	135-1800	120-1800	16.60		74	20.6	512-1250	2330	2700	VI	1.75-.500

For abbreviations, see pages 190 and 191

For Directory of the Engine Manufacturers listed above, see Table of Contents

1959 ... DIESEL ENGINES

MARINE • RAILCAR • INDUSTRIAL

VALVES	PISTON					PISTON PIN		CONNECTING RODS			MAIN BEARINGS		INJECTION SYSTEM							STARTING METHOD		OVERALL DIMENSIONS				
Exhaust Port Diameter and Lift (In.)	Material	Length (In.)	Weight with Rings and Pin (Lb.)	No. of Compression Rings	No. of Oil Rings	Diameter and Length (In.)	Locked In—	Materials (S. A. E. No.)	Center to Center Length (In.)	Weight with Cap and Bushing (Lb.)	Number	Diameter (In.)	Make of Pump	Make of Valve	Valve Type—Open or Closed	Orifices	Pressure—Nozzle Opening (Lb. per Sq. In.)	Air Cleaner—Make	Fuel Filter—Make	Make	Type	Length—Fan to Flywheel (In.)	Width (In.)	Height—To Top of Air Cleaner (In.)	Clutch Housing (S. A. E. Numbers)	Line Number
1.22-.439	AA	4.13	2.75	3	2	1.00-2.75	F	1040	7.38	3.00	7	2.50	AB	AB	C	Pi	2000	Vor	Cb	DR	Ele	39 9/16	22 3/4	25 3/8 (4)		1
2.16-.687	AA	9.31	19.19	3	2	2.75-5.53	F	1035	17.75	28.51	7	4.50	AB	AB	C	Pi	1800	Uni	P-S	D-N	E-G	86 11/16	38 11/32	62 3/16 (12)	00,0	2
2.16-.687	AA	9.31	19.19	3	2	2.75-5.53	F	1035	17.75	28.51	7	4.50	AB	AB	C	Pi	1800		Pur	LB	E-G	88 1/2	48	63 5/8	00,0	3
2.16-.687	AA	9.31	19.19	3	2	2.75-5.53	F	1035	17.75	28.51	9	4.69	AB	AB	C	Pi	1800	Don	Pur	LN	AEG	108 1/4	47 13/16	74 11/16	00,00	4
2.16-.687	AA	9.31	19.19	3	2	2.75-5.53	F	1035	17.75	28.51	9	4.69	AB	AB	C	Pi	1800	Don	Pur	LN	AEG	112 3/4	47 11/16	74 11/16	00,0	5
1.22-.474	AA	4.13	2.75	3	2	1.00-2.75	F	1040	7.38	3.00	7	2.50	AB	AB	C	Pi	2000	Uni	Cb	DR	Ele	39 9/16	22 3/4	25 3/8 (4)		6
2.16-.687	AA	9.31	19.19	3	2	2.75-5.53	F	1035	17.75	28.51	7	4.50	AB	AB	C	Pi	1800	Uni	P-S	D-N	E-G	86 11/16	38 11/32	62 3/16 (12)	00,0	7
2.16-.687	AA	9.31	19.19	3	2	2.75-5.53	F	1035	17.75	28.51	9	4.69	AB	AB	C	Pi	1800	Don	Pur	LN	AEG	108 1/4	47 13/16	74 11/16	00,0	8
2.16-.687	AA	9.31	19.19	3	2	2.75-5.53	F	1035	17.75	28.51	9	4.69	AB	AB	C	Pi	1800	Don	Pur	LN	AEG	112 3/4	47 11/16	74 11/16	00.0	9
1.44-.478	AA	5.73		3	2	1.50-3.81	F	1045	11.00		5	3.50	AB	AB	C	Pi	2000	Don	Com	DR	Ele	48 7/16	29 1/4	61 1/8		10
1.44-.478	AA	5.73		3	2	1.50-3.81	F	1045	11.00		7	3.50	AB	AB	C	Pi	2000	Don	Com	DR	Ele	57 3/4	29 1/4	51 3/16		11
1.12-.429	AA	4.12	2.36	3	2	1.00-2.84		1035	7.38	2.62	5	2.50	AB	AB	C	Pi	2000	Uni	Fra	AL	Ele	30 3/16	19 3/4	26 7/8		12
1.12-.429	AA	4.12	2.36	3	2	1.00-2.84	F	1035	7.38	2.62	7	2.50	AB	AB	C	Pi	2000	Uni	Fra	AL	Ele	38 9/16	19 3/4	26 7/8		13
1.22-	AA	4.15	2.75	3	2	1.00-2.97	F	1035	7.38	3.00	7	2.50	RM	RM	C	Pi	2000	N	Fra	DR	Ele	22 21/32	29 27/32	39 9/16		14
1.22-.440	AA	4.14		3	2	1.00-3.09	F	1035	7.38		7	2.50	RM	RM	C	Pi	2175	Own	Fra	DR	Ele	55 9/16	26 13/32	30 3/16		15
1.44-.466	AA	5.73	4.50	3	2	1.50-3.81	F	1041B	11.00	11.00	7	3.50	AB	AB	C	Pi	2000	Spr	Com	DR	Ele	51 13/32	31 7/16	50 13/16		16
1.44-.466	AA	5.73	4.50	3	2	1.50-3.81	F	1041B	11.00	11.00	7	3.50	AB	AB	C	Pi	2000	CR	Com	DR	Ele					17
1.81-.540	AA	6.75	6.70	3	2	1.75-3.90	F	1040	12.50	10.62	7	3.75	AB	AB	C	Pi	2000	CR	C-F	DR	Ele	58 1/8	29 9/16	48 1/4		18
1.63-.544	AA	6.75	8.50	3	2	1.75-4.50	F	1041B	12.50	13.00	7	3.75	AB	AB	C	Mu	2500	Fra	Fra	DR	Ele	63 11/16	35 3/16	64 9/16		19
1.63-.544	AA	6.75	8.50	3	2	1.75-4.50	F	1041B	12.50	13.00	7	3.75	AB	AB	C	Mu	2500	Fra	Fra	DR	Ele	63 11/16	35 3/16	63 13/16		20
2.19	AA			4	2						5	5.75	BS					AM	Win	Own	A-El	66 9/16	35	68 1/2		21
2.19	AA			4	2						7	5.75	BS					AM	Win	Own	A-El	87 9/16	35	68 1/2		22
2.19	AA			4	2						7	5.75	BS					AM	Win	Own	A-El	87 9/16	35	68 1/2		23
3.25-.875	CI	13.00	93.0	4	2	3.25-7.62	F	4140	22.25	85.0	5	6.25	Sc	Sc	C	Mu	3500	Opt	WP	Own	A	96	56 3/4	79 3/4		24
3.25-.875	CI	13.00	93.0	4	2	3.25-7.62	F	4140	22.25	85.0	6	6.25	Sc	Sc	C	Mu	3500	Opt	WP	Own	A	112	56 3/4	79 3/4		25
3.25-.875	CI	13.00	93.0	4	2	3.25-7.62	F	4140	22.25	85.0	7	6.25	Sc	Sc	C	Mu	3500	Opt	WP	Own	A	125	56 3/4	79 3/4		26
3.25-.875	CI	13.25	95.0	4	2	3.25-7.62	F	4140	22.25	85.0	7	6.25	Sc	Sc	C	Mu	3500	Opt	WP	Own	A	140	56 3/4	90		27
3.25-.875	CI	13.00	93.0	4	2	3.25-7.62	F	4140	22.25	85.0	9	6.25	Sc	Sc	C	Mu	3500	Opt	WP	Own	A	155	56 3/4	79 3/4		28
3.25-.875	CI	13.25	95.0	4	2	3.25-7.62	F	4140	22.25	85.0	9	6.25	Sc	Sc	C	Mu	3500	Opt	WP	Own	A	169	56 3/4	90		29
1.37-.424	AA	4.78		2	1	1.25-3.42	F	1040	8.37		5	3.00	Own	Own	C	Si	750	Don	Pur	ODS	AEG	44	27 13/32	36 7/16	2	30
1.56-.436	AA	6.13		3	1	1.81-3.73	F	1040	10.25		5	3.50	Own	Own	C	Si	750	Don	Com	ODS	AEG	59 13/16	29	48 9/16	1	31
1.56-.436	AA	6.13		3	1	1.81-3.73	F	1040	10.25		5	3.50	Own	Own	C	Si	750	Don	Com	DS	AE	46 7/16	34	42 7/16	1	32
1.56-.436	AA	6.13		3	1	1.81-3.73	F	1040	10.25		7	3.50	Own	Own	C	Si	750	Don	Com	ODS	AEG	76 13/16	29 13/32	53 7/16	1	33
1.56-.436	AA	6.13		3	1	1.81-3.73	F	1040	10.25		7	3.50	Own	Own	C	Si	750	Don	Com	DS	AE	60 13/16	36	42 7/16	1	34
1.69-.490	AA	6.36		3	1	1.75-4.36	F	1040	10.75		7	4.25	Own	Own	C	Si	750	Don	Pur	ODS	AEG	71 13/16	34 1/2	58 7/16	1	35
1.69-.490	AA	6.36		3	1	1.75-4.36	F	1040	10.75		7	4.25	Own	Own	C	Si	750	D-P	Pur	ODS	AEG	72 9/16	34 13/32	59 1/2	1	36
2.00-.588	AA	8.19		3	1	2.39-4.73	F	1040	15.00		7	3.75	Own	Own	C	Si	750	Don	Pur	ODS	AEG	70 13/16	39	62 13/32	0	37
2.00-.588	AA	8.19		3	1	2.39-4.73	F	1040	15.00		7	3.75	Own	Own	C	Si	750	D-P	Pur	ODS	AEG	90 13/16	41 13/16	59 1/2	0	38
2.00-.588	AA	8.19		3	1	2.39-4.73	F	1040	15.00		7	3.75	Own	Own	C	Si	750	D-P	Pur	ODS	AEG	90 13/16	43 1/2	59 1/2	0	39
2.00-.588	AA	7.59		3	1	2.39-4.73	F	1040	15.00		7	3.75						Don		ODS	AEG	90 13/16	41 13/16	59 1/2	0	40
2.13-.579	AA	8.19		3	1	2.39-5.14	F	1040	15.00		7	4.63	Own	Own	C	Si	750	D-P	Pur	ODS	AEG	75 13/16	47 21/32	69 13/32	0	41
2.00-.588	AA	8.19		3	1	2.39-4.73	F	1040	18.00		5	5.50	Own	Own	C	Si	750	Don	Com	ODS	AEG	83 21/64	54 1/2	79 7/64	00	42
2.00-.588	AA	8.19		3	1	2.39-4.73	F	1040	18.00		5	5.50	Own	Own	C	Si	750	Don	Com	ODS	AEG	82 5/16	54 1/2	79 7/64	00	43
2.00-.588	AA	8.19		3	1	2.39-4.73	F	1040	18.00		5	5.50	Own	Own	C	Si	750	D-P	Com	ODS	AEG	83 21/64	54 1/2	79 7/64	00	44
2.00-.588	AA	7.59		3	1	2.39-4.73	F	1040	18.00		5	5.50						Don		ODS	AEG	83 21/64	54 1/2	79 7/64	00	45
2.00-.588	AA	8.19		3	1	2.39-4.73	F	1040	18.00		7	5.50	Own	Own	C	Si	750	Don	Com	ODS	AEG	103 13/32	57 1/2	79 7/64	00	46
2.00-.588	AA	8.19		3	1	2.39-4.73	F	1040	18.00		7	5.50	Own	Own	C	Si	750	Don	Com	ODS	AEG	107 1/2	57 1/2	79 7/64	00	47
2.00-.588	AA	8.19		3	1	2.39-4.73	F	1040	18.00		7	5.50	Own	Own	C	Si	750	D-P	Com	ODS	AEG	106 13/32	57 1/2	79 7/64	00	48
2.00-.588	AA	7.59		3	1	2.39-4.73	F	1040	18.00		7	5.50						Don		ODS	AEG	103 13/32	57 1/2	79 7/64	00	49
	AA	5.50	4.1	4	2	1.63-3.25	F	4240	9.19	4.0	4	3.50	R-B	R-B	C	Pi	1800	Var	Fra	AL	Ele	31 13/32	23	34 27/64		50
1.06-.375	AA	3.75		3	1	1.12-	F	1035	7.00		3	2.37	Opt			Pi	1850	Opt	Opt	Opt	Ele	31 5/8	19 7/8	30 1/4	Opt	51
1.25-.328	AA	4.31		3	2	1.25-	F	1035	9.50		3	2.87	Opt			Pi	1850	Opt	Opt	Opt	Ele	33 5/8	21 11/16	35	Opt	52
1.25-.328	AA	4.31		3	2	1.25-	F	1035	9.50		3	2.87	Opt			Pi	1850	Opt	Opt	Opt	Ele	33 5/8	27 11/16	35	Opt	53
1.50-.437	AA	4.68		3	2	1.43-	F	1035	8.37		7	2.87	Opt			Pi	1850	Opt	Opt	Opt	Ele	47 7/16	27 1/16	37 1/8	Opt	54
1.65-.546	AA	5.93		3	2	1.50-	F	1035	10.50		7	3.25	Opt			Pi	1850	Opt	Opt	Opt	Ele	51 11/16	31 3/8	44 13/32	Opt	55
1.50-.437	AA	4.68		3	2	1.25-	F	1035	8.37		7	2.87	Opt			Pi	1850	Opt	Opt	Opt	Ele	41 27/32	15 1/8	34 13/32	Opt	56
1.65-.546	AA	5.93		3	2	1.50-	F	1035	10.50		7	3.25	Opt			Pi	1850	Opt	Opt	Opt	Ele	51 11/16	27 1/16	37 1/8	Opt	57
1.91-.552	Alu	5.88		3	2	1.75-4.22	F	8640	10.50		7	3.75	Opt			Pi	1850	Opt	Opt	Opt	Ele	53 11/16	30 13/32	48 1/2	Opt	58
1.91-.522	Alu	5.88		3	2	1.75-4.22	F	8640	10.50		7	3.75	Opt			Pi	1850	Opt	Opt	Opt	Ele	53 11/16	30 13/32	48 1/2	Opt	59
1.19-.350	Alu	4.06		3	1	1.10-3.06	F	1035	8.38		3	2.62	Opt			Pi	1850	Opt	Opt	Opt	Ele				Opt	60
1.38-.408	Alu	5.94		3	2	1.49-3.71	F	1035	10.00		3	3.25	Opt			Pi	1850	Opt	Opt	Opt	Ele				Opt	61
1.63-.567	Alu	5.44	6.19	3	2	1.50-3.97	F	8637	8.38	4.68	5	3.50	Opt			Pi	1900	Opt	Opt	Opt	Ele				Opt	62
1.63-.567	Alu	5.44	6.19	3	2	1.50-3.97	F	8637	8.38	4.68	5	3.50	Opt			Pi	1900	Opt	Opt	Opt	Ele	43 13/32	34	46 13/32	Opt	63
1.00-.352	AA	3.58		3	1	.968-2.68	F	1035	6.38	1.75	3	2.50				Pi	1850	Opt	Opt	Opt	Ele	27	19 3/4	32 1/4	Opt	64
1.25-.325	Alu	4.31		3	2	1.25-	F	1035	9.50		3	3.06	Opt			Pi	1850	Opt	Opt	Opt	Ele	33 9/16	21	32 1/2		65
1.09-.381	Alu	2.19		3	1	1.11-3.06	F	1041	7.00		3		Opt			Pi	1850	Opt	Opt	Opt	Ele					66
1.19-.350	Alu	4.06		3	1	1.10-3.06	F	1035	8.38		3	2.62	Opt			Pi	1850	Opt	Opt	Opt	Ele					67
1.38-.406	Alu	5.04	4.55	3	1	1.50-3.50	F	E4137H	9.50	6.75	5	3.88	Own	N		Mu			Fra	DR	Ele	34 17/32	24 11/16	44 3/8	3	68
1.38-.406	Alu	5.04	4.55	3	1	1.50-3.50	F	E4137H	9.50	6.75	7	3.88	Own	N		Mu		Fra	Fra	Opt	Ele	45 13/32	26 1/32	41 13/32	3	69
1.38-.406	Alu	5.04	4.55	3	1	1.50-3.50	F	E4137H	9.50	6.75	7	3.88	Own	N		Mu		Fra	Fra	Opt	Ele	47 1/16	26 1/32	42	3	70
1.16-.406	Alu	5.04	4.50	3	1	1.50-3.50	F	E4137H	9.50	6.75	7	3.88	Own	N		Mu		Fra	Fra	Opt	Ele	45 13/32	26 1/32	42 1/32	2	71
1.38-.406	Alu	4.75	4.45	3	1	1.50-3.50	F	E4137H	9.50	6.75	7	3.88	Own	N		Mu		Fra	Fra	Opt	Ele	45 3/4	25 13/32	40	2	72
1.16-.406	Alu	5.04	4.45	3	1	1.50-3.50	F	E4137H	9.50	6.75	7	3.88	Own	N		Mu		Fra	Fra	Opt	Ele	45 9/16	25 1/2	43 1/32	2	73
1.16-.406	Alu	5.04	4.50	3	1	1.50-3.50	F	E4137H	9.50	6.75	7	3.88	Own	N		Mu		Fra	Fra	Opt	Ele	47 1/16	26 13/32	43 11/16	2	74
1.75-.500	Alu	6.25	9.16	3	1	2.00-4.38	F	E4137H	12.00	10.60	5	4.50	Own	N		Mu		Fra	Fra	Opt	Ele	44 7/16	29 5/8	47 11/16	2	75
1.75-.500	Alu	6.25	9.16	3	1	2.00-4.38	F	E4137H	12.00	10.60	5	4.50	Own	N		Mu		Fra	Fra	Opt	Ele	44 7/16	29 5/8	47 11/16	2	76
1.56-.420	Alu	6.25	9.13	3	1	2.00-4.38	F	E4137H	12.00	10.60	5	4.50	Own	N		Mu		Fra	Fra	Opt	Ele	44 3/8	26 1/2	48 7/16	2	77
1.56-.420	Alu	6.25	9.13	3	1	2.00-4.38	F	E4137H	12.00	10.60	5	4.50	Own	N		Mu		Fra	Fra	Opt	Ele	44 3/8	30 9/32	53 1/16	2	78
1.75-.500	CI	6.25	11.33	3	1	2.00-4.38	F	E4137H	12.00	10.60	7	4.50	Own	N		Mu		Fra	Fra	Opt	Ele	57 9/32	29 13/32	48 11/16	2	79

For abbreviations, see pages 190 and 191

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1959 DIESEL ENGINES FOR TRUCK, BUS, TRACTOR,

			GENERAL																VALVES	
									With Bare Engine	With Standard Accessories							Shipping Weight (Lb.)			
Line Number	ENGINE MAKE AND MODEL	Built Under License from	Designed for	Type	Number of Cylinders Bore and Stroke (In.)	Cylinder Liners—Type	Cycle	Piston Displacement (Cu. In.)	Maximum Brake Hp. at Specified R.P.M.	Max. Intermittent Hp. at Specified R.P.M.	Continuous Sustained Hp. at Specified R.P.M.	Compression Ratio—to 1	Max. Combustion Pressure (Lb. per Sq. In.)	B.M.E.P. at Continuous Hp. (Lb. per Sq. In.)	Weight per Continuous Hp. (Lb.)	Max. Torque in Lb. Ft. at Specified R.P.M.	Automotive or Industrial	Marine	Arrangement	Intake Port Diameter and Lift (In.)
	Cummins (Cont'd.)																			
1	NH-180	Own	T,B,Tr	DI	6-4⅞x6	W	4	672	180-2100	.....	.....	15.50	....	....	....	504-1525	2400	.....	VI	1.56- .420
2	NH-195	Own	T,B	....	6-4⅞x6	W	4	672	195-2100	.....	.....	15.50	....	....	....	535-1500	2420	.....	VI	1.56- .420
3	HR-6	Own	T,B,Tr,M,R,I	DI	6-5⅛x6	W	4	743	175-1800	148-1800	130-1800	15.50	....	73	18.7	550-1300	2330	2700	VI	1.75- .500
4	HRF-6	Own	T,B,Tr,R,I	DI	6-5⅛x6	W	4	743	190-2000	160-2000	136-1800	15.50	....	76	16.9♦	580-1300	2325	.....	VI	1.75- .500
5	HS-6	Own	T,B,Tr,R,I	DI	6-4⅞x6	W	4	672	210-1800	178-1800	155-1800	14.00	....	98	16.0♦	673-1250	2475	.....	VI	1.75- .500
6	HRS-6	Own	T,B,Tr,M,R,I	DI	6-5⅛x6	W	4	743	240-1800	204-1800	180-1800	13.50	....	100	14.5♦	753-1300	2610	3000	VI	1.75- .500
7	NH-220	Own	T,B,Tr,R,I	DI	6-5⅛x6	W	4	743	220-2100	185-2100	150-1800	15.50	....	81	16.6	606-1600	2420	2950	VI	1.56- .420
8	NT-6	Own	T,B,Tr,M,R,I	DI	6-5⅛x6	W	4	743	250-2100	210-2100	170-1800	15.50	....	102	14.6	695-1500	2515	3050	VI	1.56- .420
9	NTO-6	Own	T,B,Tr,M,R,I	DI	6-5⅛x6	W	4	743	262-2100	222-2100	172-1800	15.50	....	103	14.5	695-1500	2515	3050	VI	1.56- .420
10	NHS-6	Own	T,B,Tr,M,R,I	DI	6-5⅛x6	W	4	743	290-2100	248-2100	192-1800	13.50	....	109	14.9	775-1500	2720	3040	VI	1.56- .420
11	NHRS-6	Own	T,B,Tr,M,R,I	DI	6-5⅛x6	W	4	743	320-2100	270-2100	220-1800	12.00	....	120	13.3	865-1600	2720	3055	VI	1.56- .420
12	NRT-6	Own	T,B,Tr,M,R,I	DI	6-5⅛x6	W	4	743	300-2100	254-2100	201-1800	14.50	....	119	12.6	810-1550	2525	3050	VI	1.56- .420
13	NRTO-6	Own	T,B,Tr,M,I,R	DI	6-5⅛x6	W	4	743	335-2100	286-2100	225-1800	14.50	....	133	11.3	900-1500	2525	3050	VI	1.56- .420
14	NVH-12	Own	Tr,M,R,I	DI	12-5⅛x6	W	4	1486	450-2100	382-2100	310-1800	15.50	....	82	16.6♦	1230-1500	5150	5700	VI	1.56- .420
15	VT-12	Own	Tr,M,R,I	DI	12-5⅛x6	W	4	1486	600-2100	510-2100	410-1800	13.50	....	108	13.7♦	1635-1500	5610	6100	VI	1.56- .420
16	L-6	Own	M,I,R	DI	6-7x10	W	4	2309	265-1000	265-1000	225-1000	15.00	....	70	39.9	1660- 600	7590	9240	VI	2.50- .682
17	LR-6	Own	M,R,I	DI	6-7¼x10	W	4	2477	320-1100	320-1100	260-1000	13.50	....	74	36.0	1760- 675	7590	9240	VI	2.50- .682
18	LRT-6	Own	M,I,R	DI	6-7¼x10	W	4	2477	450-1100	450-1100	325-1000	13.50	....	107	23.7♦	2260- 825	7690	9340	VI	2.50- .682
19	HHR-6	Own	T,B,R	DI	6-5⅛x6	W	4	743	175-1800	148-1800	130-1800	15.50	....	73	18.6♦	550-1300	2420	2700	VI	1.75- .500
20	HHRF-6	Own	T,B,R	DI	6-5⅛x6	W	4	743	190-2000	160-2000	136-1800	15.50	....	76	18.6	580-1300	2385	.....	VI	1.75- .500
21	NHH-220	Own	T,B,R,I,M	DI	6-5⅛x6	W	4	743	220-2100	185-2100	150-1800	15.50	....	81	16.1♦	606-1600	2420	2950	VI	1.56- .420
22	NHHT-6	Own	T,B,R	DI	6-5⅛x6	W	4	743	250-2100	212-2100	172-1800	15.50	....	102	15.1♦	695-1500	2590	2950	VI	1.56- .420
23	NHHRS-6	Own	T,B,R,I,M	DI	6-5⅛x6	W	4	743	320-2100	270-2100	220-1800	12.00	....	120	12.8♦	865-1600	2805	3055	VI	1.56- .420
24	NHHRT-6	Own	T,B,R,I,M	DI	6-5⅛x6	W	4	743	300-2100	254-2100	201-1800	14.50	....	119	13.0♦	810-1550	2605	3050	VI	1.56- .420
25	NT-180	Own	T,B	DI	4-5⅛x6	W	4	495	180-2100	.....	.....	15.50	....	....	....	495-1500	1935	.....	VI	1.56- .420
26	NT-200	Own	T,B	....	4-5⅛x6	W	....	495	200-2100	.....	.....	15.50	....	....	....	540-1500	1935	.....	VI	1.56- .420
27	Deutz†† F1L-712	.....	Tr,M,I	TC	1-3¾x4¾	D	....	52	13-2300	12-2200	10-2000	20.00	995	85	44.0	31-1600	440	551	VI	1.47- .240
28	F2L-712	.....	Tr,M,I	TC	2-3¾x4¾	D	4	104	26-2300	24-2200	20-2000	20.00	995	85	30.9	62-1600	617	684	VI	1.47- .240
29	F3L-712	.....	C,T,B,Tr,M,I	TC	3-3¾x4¾	D	4	156	45-2800	36-2200	30-2000	20.00	995	81	22.3	92-1800	661	815	VI	1.47- .240
30	F4L-712	.....	T,B,Tr,M,I	TC	4-3¾x4¾	D	4	207	60-2800	48-2200	40-2000	20.00	995	81	17.4	123-1800	694	826	VI	1.47- .240
31	F6L-712	.....	T,B,Tr,M,I	TC	6-3¾x4¾	D	4	311	90-2800	72-2200	60-2000	20.00	935	81	15.1	184-1800	903	1068	VI	1.47- .240
32	FA4L-514	.....	T,B,Tr,M,R,I	TC	4-4⅜x5½	D	4	325	90-2300	82-2000	56-1800	17.80	995	87	19.3	215-1200	1079	1233	VI	1.76- .395
33	FA6L-514	.....	T,B,Tr,M,R,I	TC	6-4⅜x5½	D	4	487	132-2300	120-2300	84-1800	17.80	995	87	17.7	310-1200	1486	1674	VI	1.76- .395
34	FA8L-614	.....	T,B,M,R,I	TC	8-4⅜x5½	D	4	649	180-2300	160-2300	112-1800	17.80	995	87	16.7	415-1200	1871	2091	VI	1.76- .395
35	FA12L-614	.....	T,B,M,R,I	TC	12-4⅜x5½	D	4	974	265-2300	220-2300	170-1800	17.80	995	87	16.4	625-1200	2796	2994	VI	1.76- .395
36	BFA6L-514	.....	T,B,M,R,I	TC	6-4⅜x5½	D	4	487	157-2300	150-2300	105-1800	15.40	924	93	13.6	361-1500	1431	1563	VI	1.76- .395
37	BFA8L-614	.....	T,B,M,R,I	TC	8-4⅜x5½	D	4	649	210-2300	200-2300	140-1800	15.40	924	93	13.8	483-1500	1926	2085	VI	1.76- .395
38	BF12L-614	.....	T,B,M,R,I	TC	12-4⅜x5½	D	4	974	300-2300	300-2300	210-1800	15.40	924	93	13.6	751-1500	2862	3016	VI	1.76- .395
39	F6L-714	.....	T,B,Tr,R,I	TC	6-4¾x5½	D	4	579	160-2300	145-2300	100-1800	17.80	995	90	15.4♦	375-1200	1540	.....	VI	1.76- .395
40	F8L-714	.....	T,B,Tr,M,R,I	TC	8-4¾x5½	D	....	771	220-2300	195-2300	133-1800	17.80	995	90	14.1♦	440-1200	1871	2091	VI	1.76- .395
41	F12L-714	.....	T,B,Tr,M,R,I	TC	12-4¾x5½	D	....	1157	350-2300	290-2300	200-2300	17.80	995	90	14.0♦	655-1200	2796	2994	VI	1.76- .395
42	Fairfanks- 45C3⅛	.....	M,I	PC	1-3⅛x4	W	4	30.7	.....	6.5-1800	5.25-1800	16.90	850	80	.8	19-	.....	430	VI	1.25- ....
43	Morse 45C4⅛	.....	M,I	PC	1-4⅛x4½	W	4	60.1	.....	13.2-1800	10.5-1800	16.90	850	80	6.1	30-	.....	650	VI	....
44	45C4⅛2	.....	M,I	PC	2-4⅛x5¼	W	4	140	37-	35.2-	32	16.00	850	96	21.4	.....	.....	690	VI	1.39- ....
45	49B4½	.....	M,I	DI	2-4½x5½	W	2	174	91-1800	67.5-1800	58-1800	16.00	1200	73	23.3	210- 800	.....	1350	VI	....
46	49B4½	.....	M,I	DI	3-4½x5½	W	2	262	120-1800	110-1800	90-1800	16.00	1200	78	18.9	315- 800	.....	1700	VI	....
47	49B4½	.....	M,I	DI	2-4½x5½	W	2	350	170-1800	150-1800	127-1800	16.00	1200	78	15.7	440- 800	.....	2000	VI	....
48	49B4½	.....	M,I	DI	6-4½x5½	W	2	525	280-1800	230-1800	180-1800	16.00	1200	78	14.2	630- 800	.....	2550	VI	....
49	Ford X	.....	I	DI	4-3 15/16x4 17/32	W	4	220	60-2250	49.5-2250	.....	16.00	365	96	.....	122-1600	690	690	VI	1.73- .360
50	Y	.....	I	DI	6-3 15/16x4 17/32	W	4	331	96-2250	88-2250	78-2250	16.00	300	....	.....	236-1600	880	.....	VI	1.73- .360
51	General Motors 2-71	Own	Tr,I	DI	2-4¼x5	D	2	142	67-2000	56-2000	48-1800■	17.00	1225	74	20.0	184-1400	960	.....	VI	No Valves
52	3-71	Own	I,Tr,M	DI	3-4¼x5	D	2	213	118-2300	96-2000	75-1800■	17.00	1225	77	20.3	277-1400	1525	.....	VI	No Valves
53	4-71	Own	I,Tr,M	DI	4-4¼x5	D	2	284	167-2300	134-2000	101-1800■	17.00	1225	78	17.6	375-1600	1780	.....	VI	No Valves
54	4-71	Own	B,T	DI	4-4¼x5	D	2	284	150-2300	.....	.....	17.00	1225	....	.....	375-1600	1570	.....	VI	No Valves
55	4-71T	Own	T,B,Tr,I	DI	4-4¼x5	D	2	284	171-2300	.....	.....	17.00	1225	....	.....	411-1600	1760	.....	VI	No Valves
56	6-71	Own	I,Tr,M	DI	6-4¼x5	D	2	426	252-2300	201-2000	154-1800■	17.00	1225	80	14.2	574-1600	2190	.....	VI	No Valves
57	6-71	Own	B,T	DI	6-4¼x5	D	2	426	243-2100	230-2100	.....	17.00	1225	....	.....	574-1600	1975	.....	VI	No Valves
58	6-71T	Own	T,B,Tr,I,M	DI	6-4¼x5	D	2	426	310-2300	218-2000	.....	17.00	1225	....	.....	630-1600	2165	.....	VI	No Valves
59	6-110	Own	T,Tr,I,M	DI	6-5x5.6	D	2	660	310-2000	274-2000	230-1800■	18.00	1250	77	14.2	849-1400	3260	.....	VI	No Valves
60	Twin 4-71	Own	I	DI	8-4¼x5	D	2	568	297-2100	248-2000	202-1800■	17.00	1225	78	23.9	1310-915Sh	4820‡	.....	VI	No Valves
61	Twin 6-71	Own	I,M	DI	12-4¼x5	D	2	851	504-2300	381-2000	308-1800■	17.00	1225	80	18.2	2010-915Sh	5620	.....	VI	No Valves
62	Twin 6-110	Own	I,M	DI	12-5x5.6	D	2	1320	670-2000	541-2000	460-1800■	18.00	1250	77	24.8	2975-800Sh	11400	.....	VI	No Valves
63	Quad 6-71	Own	I	DI	24-4¼x5	D	2	1702	908-2100	762-2000	616-1800■	17.00	1225	80	20.2	4020-915Sh	12425‡	.....	VI	No Valves
64	4-71E	Own	T,B,Tr,I	DI	4-4¼x5	D	2	284	145-2100	132-2000	.....	17.00	1000	88	.....	385-1200	1550	.....	VI	No Valves
65	6-71E	Own	T,B,Tr,I	DI	6-4¼x5	D	2	426	218-2100	194-2000	170-1800■	17.00	1000	88	11.8	562-1200	2010	2740	VI	No Valves
66	6-110	Own	T,Tr,I,M	DI	6-5x5 9/16	D	2	660	335-2000	274-2000	237-1800■	18.00	1250	79	13.8	845-1200	3260	4335	VI	No Valves
67	Twin 6-71T	Own	I,M	DI	12-4¼x5	D	2	851	620-2300	435-2100	.....	17.00	1200	....	.....	1200-1400	5970	.....	VI	No Valves
68	2-53	Own	Tr,I	DI	2-3⅞x4½	W	2	106	47-2000	42-2000	33-1800	17.00	1135	68	22.7♦	118-2000	750	.....	VI	No Valves
69	3-53	Own	T,Tr,M,I	DI	3-3⅞x4½	W	2	159	97-2800	81-2500	58-2200	17.00	1135	66	15.3♦	187-1200	890	1050	VI	No Valves
70	4-53	Own	T,B,Tr,M,I	DI	4-3⅞x4½	W	2	212	130-2800	112-2500	82-2200	17.00	1135	69	12.7♦	254-1200	1040	1200	VI	No Valves
71	6V-53	Own	T,B,Tr,I	DI	6-3⅞x4½	W	2	318	195-2800	171-2500	125-2200	17.00	1135	71	10.7♦	386-1200	1340	.....	VI	No Valves
72	6V-71	Own	T,B,Tr,M,I	DI	6-4¼x5	W	2	426	252-2300	198-2100	162-1800	17.00	1235	84	11.5♦	565-1200	1855	2570	VI	No Valves
73	8V-71	Own	T,B,Tr,M,I	DI	8-4¼x5	....	2	567	334-2300	263-2100	215-1800	17.00	1235	83	10.7♦	750-1200	2305	3150	VI	No Valves
74	12V-71	Own	T,B,Tr,I	DI	12-4¼x5	D	2	851	504-2300	396-2100	324-1800	17.00	1235	84	9.9♦	1130-1200	3205	4485	VI	No Valves
75	16V-71	Own	Tr,M,I	DI	16-4¼x5	D	2	1135	675-2300	.....	.....	17.00	1235	....	.....	.....	.....	7000	VI	No Valves
76	GrayMarine Four-D129	Cont	M	TC	4-3¼x3⅞	W	4	129	.....	25-2000	20-1800	16.25	....	68	35.0	87-1200	.....	700	VI	1.25- .352
77	Four-D157	.....	M	TC	4-3⅜x4⅜	W	4	157	.....	30-1800	24-1600	15.00	....	75	45.8	108-1800	.....	1100	VI	1.18- .273
78	Four-D277	Cont	M	TC	4-4x5½	W	4	277	.....	60-2200	50-2000	16.10	....	71	28.8	171-2000	.....	1440	VI	1.37- .248
79	Six-D427	Lanova	M	TC	6-4 5/16x4⅞	N	4	427	.....	130-2400	110-2200	14.40	....	92	13.4	250-2200	.....	1475	VI	1.72- .440
80	Six-D572	.....	M	TC	6-4¾x5⅜	N	4	572	.....	150-2400	135-2200	15.00	....	78	18.6	401-1600	.....	2510	VI	1.87- .546
81	Six-D802	Lanova	M	TC	6-5 9/16x5½	D	4	802	.....	190-2200	157-2000	15.00	....	77	17.2	455-2200	.....	2700	VI	1.94- .391

For abbreviations, see pages 190 and 191

For Directory of the Engine Manufacturers listed above, see Table of Contents

MARINE, RAILCAR, OR INDUSTRIAL USE—*continued*

VALVES	PISTON					PISTON PIN		CONNECTING RODS			MAIN BEARINGS		INJECTION SYSTEM							START-ING METHOD		OVERALL DIMENSIONS				
Exhaust Port Diameter and Lift (In.)	Material	Length (In.)	Weight with Rings and Pin (Lb.)	No. of Compression Rings	No. of Oil Rings	Diameter and Length (In.)	Locked In—	Materials (S. A. E. No.)	Center to Center Length (In.)	Weight with Cap and Bushing (Lb.)	Number	Diameter (In.)	Make of Pump	Make of Valve	Valve Type—Open or Closed	Orifices	Pressure—Nozzle Opening (Lb. per Sq. In.)	Air Cleaner—Make	Fuel Filter—Make	Make	Type	Length—Fan to Flywheel (In.)	Width (In.)	Height—To Top of Air Cleaner (In.)	Clutch Housing (S. A. E. Numbers)	Line Number
1.56- .500	Alu	6.25	9.13	3	1	2.00-4.38	F	E4137H	12.00	10.60	7	4.50	Own	N	...	Mu	....	Fra	Fra	Opt	Ele	59 1/8	30 5/8	48 13/32	2	1
1.56- .420	Alu	6.25	9.13	3	1	2.00-4.38	F	E4137H	12.00	10.60	7	4.50	Own	N	...	Mu	....	Fra	Fra	Opt	Ele	59 1/8	30 5/8	48 13/32	......	2
1.75- .500	Alu	6.25	9.16	3	1	2.00-4.38	F	E4137H	12.00	10.60	7	4.50	Own	N	...	Mu	....	Fra	Fra	Opt	Ele	57 9/32	29 15/32	48 1/16	2	3
1.75- .500	Alu	6.25	9.16	3	1	2.00-4.38	F	E4137H	12.00	10.60	7	4.50	Own	N	...	Mu	....	Fra	Fra	Opt	Ele	60	29 3/4	48 3/4	2	4
1.75- .500	Alu	6.25	9.18	3	1	2.00-4.38	F	E4137H	12.00	10.60	7	4.50	Own	N	...	Mu	....	Fra	Fra	Opt	Ele	58 9/16	32 5/8	48 11/16	1	5
1.75- .500	Alu	6.25	9.03	3	1	2.00-4.38	F	E4137H	12.00	10.60	7	4.50	Own	N	...	Mu	....	Fra	Fra	Opt	Ele	58 9/16	32 5/8	48 11/16	1	6
1.56- .420	Alu	6.25	9.13	3	1	2.00-4.38	F	E4137H	12.00	10.60	7	4.50	Own	N	...	Mu	....	Fra	Fra	Opt	Ele	60 11/32	31 9/32	48 3/4	1	7
1.56- .420	Alu	6.25	8.13	3	1	2.00-4.38	F	E4137H	12.00	10.60	7	4.50	Own	N	...	Mu	....	Fra	Fra	Opt	Ele	60 11/32	38 3/16	48 3/4	1	8
1.56- .420	Alu	6.25	9.13	3	1	2.00-4.38	F	E4137H	12.00	10.60	7	4.50	Own	N	...	Mu	....	Fra	Fra	Opt	Ele	60 11/32	38 3/16	48 3/4	1	9
1.56- .420	Alu	6.25	8.93	3	1	2.00-4.38	F	E4137H	12.00	10.60	7	4.50	Own	N	...	Mu	....	Fra	Fra	Opt	Ele	59 7/32	34 3/16	49 1/16	1	10
1.56- .420	Alu	6.00	8.83	3	1	2.00-4.38	F	E4137H	12.00	10.60	7	4.50	Own	N	...	Mu	....	Fra	Fra	Opt	Ele	59 7/32	34 3/16	49 1/16	1	11
1.56- .420	Alu	6.25	8.93	3	1	2.00-4.38	F	E4137H	12.00	10.60	7	4.50	Own	N	...	Mu	....	Fra	Fra	Opt	Ele	59 7/32	38 3/16	48 3/4	1	12
1.56- .420	Alu	6.25	8.93	3	1	2.00-4.38	F	E4137H	12.00	10.60	7	4.50	Own	N	...	Mu	....	Fra	Fra	Opt	Ele	59 7/32	38 3/16	48 3/4	1	13
1.56- .420	Alu	6.25	9.13	3	1	2.00-4.38	F	E4137H	12.00	12.50	7	5.00	Own	N	...	Mu	....	Vor	Fra	Opt	Ele	73 3/8	49 3/8	53 3/4	0	14
1.56- .420	Alu	6.25	8.93	3	1	2.00-4.38	F	E4137H	12.00	12.50	7	5.00	Own	N	...	Mu	....	Vor	Fra	Opt	Ele	73 3/8	44 3/16	60 1/16	0	15
2.50- .682		10.7	41.35			2.88-5.97	F	C1040	18.00	30.00	7	5.50	Own	......	...	Mu	....	Vor	......	......	A	98	39 5/16	58 3/4	0	16
2.50- .682	Alu	10.37	29.10	3	2	2.88-5.97	F	C1040	18.00	30.00	7	5.50	Own	N	...	Mu	....	Vor	Fra	......	A	99 5/16	39 5/16	58 3/4	0	17
2.50- .682	Alu	10.4	29.10	3	2	2.88-5.97	F	C1040	18.00	30.00	7	5.50	Own	N	...	Mu	....	Vor	Fra	......	A	99 5/16	39 5/16	58 3/4	0	18
1.75- .500	......	6.25	9.16			2.00-4.38	F	E4137H	12.00	10.60	7	4.50	Own	......	...	Mu	....	Fra	......	Opt	Ele	65 11/16	59 15/16	24 1/16	2	19
1.75- .500	......	6.25	9.16			2.00-4.38	F	E4137H	12.00	10.60	7	4.50	Own	......	...	Mu	....	Fra	......	Opt	Ele	65 11/16	59 15/16	24 1/16	2	20
1.56- .420	Alu	6.25	9.13	3	1	2.00-4.38	F	E4137H	12.00	10.60	7	4.50	Own	N	...	Mu	....	Fra	Fra	Opt	Ele	60 11/32	31 9/32	48 3/4	1	21
1.56- .420	Alu	6.25	9.13	3	1	2.00-4.38	F	E4137H	12.00	10.60	7	4.50	Own	N	...	Mu	....	Fra	Fra	Opt	Ele	65 11/16	67 1/4	22 5/8	1	22
1.56- .420	......	6.00	8.83			2.00-4.38	F	E4137H	12.00	10.60	7	4.50	Own	......	...	Mu	....	Fra	......	Opt	Ele	77 15/16	61 3/8	22 5/8	1	23
1.56- .420	Alu	6.25	8.93	3	1	2.00-4.38	F	E4137H	12.00	10.60	7	4.50	Own	N	...	Mu	....	Fra	Fra	Opt	Ele	65 11/16	67 1/4	22 5/8	1	24
1.56- .420	Alu	6.25	9.13	3	1	2.00-4.38	F	E4137H	12.00	10.60	5	4.50	Own	N	...	Mu	....	Fra	Fra	Opt	Ele	44 11/32	31 1/8	53 1/16	......	25
1.56- .420	Alu	6.25	9.13	3	1	2.00-4.38	F	E4137H	12.00	10.60	5	4.50	Own	N	...	Mu	....	Fra	Fra	Opt	Ele	44 11/32	31 1/8	53 1/16	......	26
1.34- .240	AA	4.50	3.04	3	2	....	F	ST5132	8.88	4.30	2	2.75	AB	Own	C	Pi	1777	MH	AB	AB	E-H	19 1/8	22 7/8	30 5/16	3,4,5,6	27
1.34- .240	AA	4.50	3.04	3	2	....	F	ST5132	8.88	4.30	3	2.75	AB	Own	C	Pi	1777	MH	AB	AB	E-H	24 5/8	24 5/8	30 1/2	3,4,5,6	28
1.34- .240	AA	4.50	3.04	3	2	....	F	ST5132	8.88	4.30	4	2.75	AB	Own	C	Pi	1777	MH	AB	AB	E-H	30 1/8	27	33 1/16	3,4	29
1.34- .240	AA	4.50	3.04	3	2	....	F	ST5132	8.88	4.30	5	2.75	AB	Own	C	Pi	1777	MH	AB	AB	Ele	36 1/4	27	33 1/4	3,4	30
1.34- .240	AA	4.50	3.04	3	2	....	F	ST5132	8.88	4.30	7	2.75	AB	Own	C	Pi	1777	MH	AB	AB	Ele	48 5/8	27	33 1/4	3,4	31
1.64- .395	AA	6.06	5.48	3	2	....	F	ST5132	10.03	6.82	5	2.75	AB	AB	C	Pi	1777	MH	BK	AB	Ele	40	31 5/8	40 3/8	1	32
1.64- .395	AA	6.06	5.48	3	2	....	F	ST5132	10.03	6.82	7	2.75	AB	AB	C	Pi	1777	MH	BK	AB	Ele	54	33	40 1/8	1	33
1.64- .395	AA	6.06	5.48	3	2	....	F	ST5132	10.88	7.01	5	3.50	AB	AB	C	Pi	1777	MH	BK	AB	Ele	47 7/8	47 7/8	39 7/8	1	34
1.64- .395	AA	6.06	5.48	3	2	....	F	ST5132	10.88	7.01	7	3.50	AB	AB	C	Pi	1777	MH	BK	AB	AE	65 1/2	47 7/8	43 1/4	1	35
1.64- .395	AA	6.06	5.48	3	2	....	F	ST5132	10.03	7.01	7	3.50	AB	AB	C	Pi	1777	MH	BK	AB	AEI	58 3/4	34 3/8	44 3/16	1	36
1.64- .395	AA	6.06	5.48	3	2	....	F	ST5132	10.88	7.01	5	3.50	AB	AB	C	Pi	1777	MH	BK	AB	Ele	56 5/8	50	41 9/16	1	37
1.64- .395	AA	6.06	5.48	3	2	....	F	ST5132	10.88	7.01	7	3.50	AB	AB	C	Pi	1777	MH	BK	AB	Ele	76 1/4	47 7/16	35 5/8	1	38
1.64- .395	AA	6.06	5.48	3	2	1.58-.....	F	ST5132	10.88	7.01	4	3.50	R-B	R-B	C	Pi	1777	MH	R-B	R-B	AE	40 13/64	47 7/8	38 45/64	1	39
1.64- .395	AA	6.06	5.48	3	2	1.58-.....	F	ST5132	10.88	7.01	5	3.50	R-B	R-B	C	Pi	1777	MH	R-B	R-B	AE	47 7/8	47 7/8	38 45/64	1	40
1.64- .395	AA	6.06	5.48	3	2	1.58-.....	F	ST5132	10.88	7.01	7	3.50	R-B	R-B	C	Pi	1777	MH	R-B	R-B	AE	65 1/2	47 7/8	35	1	41
1.00-......	Alu	......	......	3	1	....	F	....	......	......	2	2.00	Dem	Dem	C	Pi	1750	AC	AC	AL	E-H	18	......	21 1/2	......	42
....	Alu	......	......	3	1	....	F	....	......	......	2	2.50	Dem	Dem	C	Pi	1750	AC	AC	AL	E-H	30	......	34	......	43
....	Alu	......	......	3	2	....	F	....	......	......			B-D	B-D	C	Pi	2000	AC	AC	AL	A-EI					44
2.30- .520	Alu	6.36	6.75	3	2	1.75-3.85	F	1141	11.87	8.25	3	4.00	RM	AB	C	Si	2200	Don	Com	AL	A-EI	32 1/4	28 1/4	40 7/8	1	45
2.30- .520	Alu	6.36	6.75	3	2	1.75-3.85	F	1141	11.87	8.25	4	4.00	RM	AB	C	Si	2200	Don	Com	AL	A-EI	38 7/8	28 1/4	40 7/8	1	46
2.30- .520	Alu	6.36	6.75	3	2	1.75-3.85	F	1141	11.87	8.25	5	4.00	RM	AB	C	Si	2200	Don	Com	AL	A-EI	45 1/4	28 1/4	40 7/8	1	47
2.30- .520	Alu	6.36	6.75	3	2	1.75-3.85	F	1141	11.87	8.25	7	4.00	RM	AB	C	Si	2200	Don	Com	AL	A-EI	59 5/16	28 1/4	40 7/8	1	48
1.54- .360	AA	4.63	......	3	2	1.25-3.39	...	....	8.00	......	5	3.00	Sim	......	...	Mu	....	AC	P-A	Luc	Ele	31 13/32	23 13/64	36 3/4	......	49
1.54- .360	AA	4.63	......	3	2	1.25-3.39	...	....	8.00	......	7	3.00	Sim	......	...	Mu	2725	......	......	......	Ele	40 27/64	22 1/16	35 7/32	......	50
1.58- .375	AT	6.16	7.83	4	2	1.50-3.62	F	1141A	10.12	6.14	3	3.50	Own	Own	C	Mu	450	Don	Com	DR	Ele	31	28 1/16	40 1/2	2	51
1.58- .394	AT	6.16	7.83	4	2	1.50-3.62	F	1141A	10.12	6.14	4	3.50	Own	Own	C	Mu	450	Don	Com	DR	Ele	37 1/8	29 1/2	40 1/2	2	52
1.58- .394	AT	6.16	7.83	4	2	1.50-3.62	F	1141A	10.12	6.14	5	3.50	Own	Own	C	Mu	450	Don	Com	DR	Ele	42 7/8	29 1/2	41 11/16	2	53
1.58- .394	AT	6.16	7.83	4	2	1.50-3.62	F	1141A	10.12	6.14	5	3.50	Own	Own	C	Mu	450	Don	Com	DR	Ele				2	54
1.20- .394	AT	6.00	7.83	4	2	1.50-3.62	F	1141A	10.12	6.14	5	3.50	Own	Own	C	Mu	450	Don	Com	DR	Ele	43 23/32	45 5/16	40 1/8	......	55
1.58- .394	AT	6.16	7.83	4	2	1.50-3.62	F	1141A	10.12	6.14	7	3.50	Own	Own	C	Mu	450	Don	Com	DR	Ele	54 7/16	29 1/2	42 23/32	1	56
1.58- .394	AT	6.16	7.83	4	2	1.50-3.62	F	1141A	10.12	6.14	7	3.50	Own	Own	C	Mu	450	Don	Com	DR	Ele				1	57
1.58- .394	AT	6.00	7.83	4	2	1.50-3.62	F	1141A	10.12	6.14	7	3.50	Own	Own	C	Mu	450	Don	Com	DR	Ele	55 1/2	33 1/8	47 1/16	......	58
1.93- .454	AT	6.50	11.00	4	2	1.63-4.34	F	1141A	10.60	7.36	7	4.00	Own	Own	C	Mu	450	Don	Com	DR	Ele	62 5/8	37 1/8	49 5/16	1/2	59
1.58- .394	AT	6.16	7.83	4	2	1.50-3.62	F	1141A	10.12	6.14	10	3.50	Own	Own	C	Mu	450	Don	Com	DR	Ele	83	56	57 15/16	......	60
1.58- .394	AT	6.16	7.83	4	2	1.50-3.62	F	1141A	10.12	6.14	14	3.50	Own	Own	C	Mu	450	Don	Com	DR	Ele	94 1/2	56	57 15/16	......	61
1.93- .454	AT	6.50	11.00	4	2	1.63-4.34	F	1141A	10.60	7.36	14	4.00	Own	Own	C	Mu	450	Don	Com	DR	Ele	125 3/4	66	87 1/2	......	62
1.58- .394	AT	6.16	7.83	4	2	1.50-3.62	F	1141A	10.12	6.14	28	3.50	Own	Own	C	Mu	450	Don	Com	DR	Ele	181 3/4	57 9/16	68 5/8	......	63
1.20- .394	AT	6.16	7.83	4	2	1.50-3.62	F	1141A	10.12	6.14	5	3.50	Own	Own	C	Mu	450	Don	Com	DR	Ele	43 23/32	36 13/16	40 1/8	......	64
1.20- .394	AT	6.16	7.83	4	2	1.50-3.62	F	1141A	10.12	6.14	7	3.50	Own	Own	C	Mu	450	Don	Com	DR	Ele	54 3/4	35 3/8	49 3/8	......	65
1.52- .454	AT	6.50	......	4	2	1.63-4.33	F	1141A	10.60	7.50	7	4.00	Own	Own	C	Mu	450	Don	Com	DR	Ele	62 5/8	37 1/8	49 5/16	......	66
1.20- .394	AT	6.00	7.83	4	2	1.50-3.62	F	1141A	10.12	6.14	14	3.50	Own	Own	C	Mu	450	Don	Com	DR	Ele	82 1/2	64 1/2	58 5/8	......	67
1.40- .327	......	5.42	6.34	4	2	1.38-3.24	F	1141	8.80	3.76	3	3.00	......	Own	C	....	600	A-D	AC	......	Ele	25	21 15/16	35 3/16	......	68
1.40- .327	......	5.42	6.34	4	2	1.38-3.24	F	1141	8.80	3.78	4	3.00	......	Own	C	Mu	600	A-D	AC	......	Ele	33 11/32	29 5/8	35 19/32	......	69
1.40- .327	......	5.42	6.34	4	2	1.38-3.24	F	1141	8.80	3.78	5	3.00	......	Own	C	Mu	600	A-D	AC	......	Ele	38 3/4	25 9/16	39 21/32	......	70
1.40- .327	......	5.42	6.34	4	2	1.38-3.24	F	1141	8.80	3.66	4	3.50	......	Own	C	Mu	600	A-D	AC	......	Ele	38 3/4	27	34 7/8	......	71
1.20- .394	Stp	6.16	7.83	4	2	1.50-3.62	F	St	10.13	5.00	4	4.50	......	Own	C	Mu	650	Don	AC	......	Ele	41 5/8	39 1/4	50	......	72
1.20- .394	Stp	6.16	7.83	4	2	1.50-3.62	F	St	10.13	5.00	5	4.50	......	Own	C	Mu	650	Don	AC	......	Ele	47 1/4	39 1/4	50 1/2	......	73
1.20- .394	Stp	6.16	7.83	4	2	1.50-3.62	F	St	10.13	5.00	7	4.50	......	Own	C	Mu	650	Don	AC	......	Ele	59 1/2	45 1/2	54 15/16	......	74
1.20- .394	Stp	6.16	7.83	4	2	1.50-3.62	F	St	10.13	5.00	9	4.50	......	Own	C	Mu	650	Don	AC	......	Ele				......	75
1.00- .352	Alu	3.58	......	3	1	.968-2.68	F	1035	6.38	......	3	2.50	RM	......	...	Pi	1850	N	Fra	DR	Ele	44 3/4	24 5/8	28 5/16	......	76
1.09 .273	AA	3.75	......	3	2	1.12-2.75	F	1035	7.00	......	3	2.47	RM	AB	...	Pi	1800	Own	ACB	AL	Ele	50	20 15/16	30 11/16	3	77
1.25- .248	AA	4.31	4.00	3	2	1.25-3.31	F	1035	9.50	......	3	2.88	RM	AB	...	Pi	1850	N	Fra	AL	Ele	56	26 3/8	39 7/16	3	78
1.50- .440	Alu	4.68	......	3	2	1.43-3.62	F	....	8.37	......	7	2.87	RM	AB	...	Pi	1800	Own	Pur	DR	Ele	67	28	27	3	79
1.66- .546	AA	6.00	......	3	2	1.50-4.00	F	1035	10.50	4.72	5	3.37	AB	AB	...	Pi	1800	Own	Fra	DR	Ele	72	26	40 5/8	1	80
1.64- .391	AA	5.87	......	4	1	1.75-4.22	F	1035	10.50	......	7	3.25	RM	AB	...	Pi	1800	Own	Fra	DR	Ele	56 9/16	31 1/4	43 1/4	......	81

For abbreviations, see pages 190 and 191

For Directory of the Engine Manufacturers listed above, see Table of Contents

1959 DIESEL ENGINES FOR TRUCK, BUS, TRACTOR,

Line Number	Engine Make and Model	Built Under License from	GENERAL: Designed for	Type	Number of Cylinders Bore and Stroke (In.)	Cylinder Liners—Type	Cycle	Piston Displacement (Cu. In.)	With Bare Engine: Maximum Brake Hp. at Specified R.P.M.	With Standard Accessories: Max. Intermittent Hp. at Specified R.P.M.	With Standard Accessories: Continuous Sustained Hp. at Specified R.P.M.	Compression Ratio—to 1	Max. Combustion Pressure (Lb. per Sq. In.)	B.M.E.P. at Continuous Hp. (Lb. per Sq. In.)	Weight per Continuous Hp. (Lb.)	Max. Torque in Lb. Ft. at Specified R.P.M.	Shipping Weight (Lb.): Automotive or Industrial	Shipping Weight (Lb.): Marine	VALVES: Arrangement	Intake Port Diameter and Lift (In.)
1	Hercules DD198		Tr,M,R,I	DI	4-3¾x4½	D	4	198	55-2000	46.5-2000	45-1800	16.20	750	100	13.3	156-1500	600		VI	1.44-.369
2	DD226		Tr,M,R,I	DI	4-4x4½	N		226	65-2000	55-2000	52-1800	16.20	750	101	11.5	178-1500	600		VI	1.44-.369
3	DOOD	Own	T,Tr,M,I,B	TC	4-4¼x4½	D	4	255	79-2600	66-2600	53-1800	15.50	750	91	14.2	182-1400	750		VI	1.62-.375
4	DJXH	Own	T,B,Tr,M,I	TC	6-3¾x4½	D	4	298	99-2600	84-2600	67-1800	15.50	750	99	14.2	234-1400	950		VI	1.75-.375
5	DD298		Tr,M,R,I	DI	6-3¾x4½	D		298	85-2000	72.5-2000	68-1800	16.20	750	101	11.0	232-1500	750		VI	1.44-.369
6	DD339		Tr,I	DI	6-4x4½	N	4	339	99-2000	84-2000	78-1800	16.20	750	101	9.6	262-1500	750		VI	1.44-.369
7	DWXLD	Own	T,B,Tr,M,R,I	TC	6-4¼x5	D	4	426	142-2600	121-2600	95-1800	15.50	750	98	14.2	333-1600	1350		VI	1.68-.395
8	DRXC	Own	T,B,Tr,M,R,I	TC	6-4⅝x5¼	D	4	529	147-2200	125-2200	100-1600	15.00	750	95	16.0	400-1100	1600		VI	2.00-.395
9	DFXE	Own	T,B,Tr,M,R,I	TC	6-5⅝x6	D	4	895	228-2100	194-2100	170-1600	14.80	750	94	14.7	680-1200	2500		VI	2.37-.500
10	DFXH	Own	T,B,Tr,M,R,I	TC	6-5¾x6	D	4	935	260-2100	221-2100	187-1600	14.80	750	99	13.9	750-1200	2600		VI	2.60-.500
11	DNXV8D	Own	T,B,Tr,M,I	TC	8-6¼x6	D	4	1468	388-1800	330-1800	280-1600	14.80	750	94	15.1	1100-1200	4200		VI	2.87-.500
12	TCD1468	Own	M,I	TC	8-6¼x6	D	4	1468	500-1800	425-1800	345-1600	14.80	750	115	13.9	1380-1600	4800		VI	2.87-.500
13	DD149		Tr,M,I	DI	3-3¾x4½	D	4	149	40.5-2000	34.5-2000	32.2-1800	16.20	750	95	17.1	114-1400	550		VI	1.44-.369
14	DD169		Tr,M,I	DI	3-4x4½	D	4	169	46-2000	39-2000	37-1800	16.20	750	96	14.9	130-1400	550		VI	1.44-.369
15	International UD370	Own	Tr,I	PC	4-4⅝x5½	D	4	370	105-2200	95-2200	66-1800	16.50		85	22.2	288-1420	1600		VI	1.66-.500
16	UD14A	Own	Tr,I	PC	4-4¾x6½	W	4	461	105-1800	76-1400	60.8-1400	15.00		75	29.2	345-1050	1775		VI	1.78-.532
17	UD554	Own	I	PC	6-4⅝x5½	D	4	554	150-2300	127-2300	101-1800	16.00		85	20.2	288-1420	2190		VI	1.66-.532
18	UD18A	Own	Tr,I	PC	6-4¾x6½	W	4	691	131-1600	125-1600	100-1600	16.50		72	28.6	470-900	2860		VI	1.78-.532
19	UD1091	Own	Tr,I	PC	6-5¾x7	D	4	1091	215-1500	202-1500	152-1400	15.00		79	26.9	820-1050	4095		VI	2.31-.625
20	UDT1091		Tr,I	PC	6-5¾x7	D	4	1091	300-1500	250-1500	200-1500	15.00		97	21.5	1000-1250	4300		VI	2.31-.625
21	UD236	Own	Tr,I	PC	6-3 11/16x3 11/16	D	4	236	75-2400	65-2400	55-2400	17.50		77	16.5	174-1400	905		VI	1.31-.406
22	UD282	Own	Tr,I	PC	6-3 11/16x4 13/32	D	4	282	95-2400	85-2400	71-2400	18.00		83	12.7	218-1400	905		VI	1.31-.406
23	JLO†† DL325		GP		1-2¾x3 11/16		2	20		7-2500	6-2500	18.00		95	18.3	15-1800	110			
24	DL660		GP		1-3 11/16x4 1/16		2	40		12-2000	10-2000	15.50		99	18.7	33-1500	187			
25	Mack END673		T,B	AS	6-4⅞x6	D	4	672	170-2100	159.4-2100†		16.59	1250			480-1200	1927		VI	2.05-.563
26	ENDT673		T,B	AS	6-4⅞x6	D	4	672	205-2100	190-2100		16.59	1575	125		560-1400	1930		VI	2.05-.563
27	Mercedes-Benz OM636		C,T,B,Tr,M,I	PC	4-3 11/16x3 11/16	N	4	108	46-3500	43-3500	32-3000	19.00		85	12.5	69-1800	400	506	VI	1.27-.327
28	OM312		C,T,B,Tr,M,I	PC	6-2 7/16x4¾	N	4	280	110-3000	100-3000	70-2400	19.50		90	11.4♠	171-1700	800	1100	VI	1.57-
29	OM321		C,T,B,Tr,M,I	PC	6-3⅜x4¾	N	4	311	120-3000	110-3000	85-2600	20.80		91	9.2♠	238-1600	782	1135	VI	1.57-
30	OM315		C,T,B,Tr,M,I	PC	6-4 1/16x5½	N	4	505	145-2100	145-2100	110-1800	18.50		107	16.0♠	398-1300	1760	2020	VI	1.81-
31	OM326		C T B Tr M R I	PC	6-5 1/32x5 11/16	N	4	659	200-2200	153-1800	140-1800	20.50		102	12.4♠	506-1300	1740	1850	VI	1.46-
32	Minneapolis-Moline D206	Own	Tr	EC	4-3⅝x5	N	4	206	50-1750	45-1750		14.90		99		165-1100			VI	1.25-.469
33	D283	Own	Tr,I	EC	4-4¼x5	N	4	283	49-1300	46-1300		14.90		99		210-1100	1590		VI	1.50-.494
34	D336	Own	Tr	EC	4-4⅝x5	N	4	336	67-1450	60-1450		14.90		101		250-1100			VI	1.50-.494
35	D425	Own	Tr,I	EC	6-4¼x5	N	4	425	89-1500	80-1500		14.90		102		325-1100	2190		VI	1.50-.494
36	Murphy ME-4, ME-90	Own	I,M	DI	4-5¾x6½	W	4	675		112-1200	96-1200	16.00		88	44.8♠	475-950	♦4300	△6650	V4	1.62-.500
37	11, AA-107	Own	I,M	DI	4-5¾x6½	W	4	675		117-1200	107-1200	16.0		98	40.3♠	530-800	♦4300	△6650	V4	1.62-.500
38	°111, AAA-123	Own	I,M	DI	4-5¾x6½	W	4	675		133-1200	123-1200	16.0		112	35.4♠	560-1050	♦4350	△6825	V4	1.62-.500
39	12, AB-117	Own	I,M	DI	4-6x6½	W	4	735		127-1200	117-1200	16.00		99	36.8♠	600-750	♦4300	△6650	V4	1.62-.500
40	°112	Own	I	DI	4-6x6½	W	4	735		149-1200	133-1200	16.0		112	32.7	640-950	♦4350		V4	1.62-.500
41	20, BJ-144	Own	I,M	DI	6-5½x6½	W	4	927		159-1200	144-1200	16.0		96	36.1♠	710-600	♦5200	△8600	V4	1.37-.500
42	▲20G				6-5½x6½	W		927		159-1200	144-1200			96	36.1	700-600	♦5200		V4	
43	°120, ABJ-155	Own	I,M	DI	6-5½x6½	W	4	927		170-1200	155-1200	16.0		103	34.2♠	740-600	♦5300	△8265	V4	1.37-.500
44	21	Own	I	DI	6-5¾x6½	W	4	1013		176-1200	161-1200	16.00		98	32.3	825-600	♦5200		V4	1.62-.500
45	▲21G				6-5¾x6½	W		1013		176-1200	161-1200			98	32.3	805-600	♦5200		V4	
46	°121	Own	I	DI	6-5¾x6½	W	4	1013		202-1200	182-1200	16.00		111	29.3	860-850	♦5300		V4	1.62-.500
47	22	Own	I	DI	6-6x6½	W	4	1103		193-1200	177-1200	16.00		99	29.4	920-600	♦5200		V4	1.62-.500
48	°122	Own	I	DI	6-6x6½	W	4	1103		221-1200	203-1200	16.00		114	36.1	920-900	♦5300		V4	1.62-.500
49	211, BAA-118	Own	I,M	DI	4-5¾x6½	W	4	675		128-1400	118-1400	16.00		92	36.4♠	510-1000	♦4300	△8650	V4	1.62-.500
50	311, CAA-133	Own	I,M	DI	4-5¾x6½	W	4	675		143-1400	133-1400	16.00		105	32.7♠	565-1000	♦4350	△6825	V4	1.62-.500
51	212, BAB-128	Own	I,M	DI	4-6x6½	W	4	735		138-1400	128-1400	16.00		92	33.6♠	567-1000	♦4300	△6650	V4	1.62-.500
52	°312, CAB-144	Own	I,M	DI	4-6x6½	W	4	735		154-1400	144-1400	16.00		104	30.2♠	635-1000	♦4350	△6825	V4	1.62-.500
53	220, BBJ-157	Own	I,M	DI	6-5½x6½	W	4	927		169-1400	157-1400	16.00		88	33.2♠	685-1000	♦5200	△8000	V4	1.37-.500
54	°320, CBJ-170	Own	I,M	DI	6-5½x6½	W	4	927		182-1400	170-1400	16.00		96	31.2♠	720-1000	♦5300	△8265	V4	1.37-.500
55	221	Own	I	DI	6-5¾x6½	W	4	1013		185-1400	173-1400	16.00		90	30.1	760-1000	♦5200		V4	1.62-.500
56	°321	Own	I	DI	6-5¾x6½	W	4	1013		210-1400	197-1400	16.00		103	26.9	850-1000	♦5300		V4	1.62-.500
57	222	Own	I	DI	6-6x6½	W	4	1103		204-1400	190-1400	16.00		94	27.4	835-1000	♦5200		V4	1.62-.500
58	°322	Own	I	DI	6-6x6½	W	4	1103		235-1400	220-1400	16.00		105	24.1	945-1000	♦5300		V4	1.62-.500
59	▲22G				6-6x6½	W		1103		193-1200	177-1200				26.6	760-1200	♦4700		V4	
60	24		I		6-6⅜x6½	W		1245		213-1200	198-1200				23.7	860-1200	♦4700		V4	
61	°124				6-6⅜x6½	W		1245		240-1200	225-1200				21.3	970-1200	♦4800		V4	
62	▲220G				6-5½x6½	W		927		169-1400	157-1400				29.9	570-1400	♦4700		V4	
63	▲221G				6-5¾x6½	W		1013		185-1400	173-1400				27.2	640-1400	♦4700		V4	
64	▲222G				6-6x6½	W		1103		204-1400	190-1400				24.8	700-1400	♦4700		V4	
65	224				6-6⅜x6½	W		1245		230-1400	214-1400				21.9	790-1400	♦4700		V4	
66	°324				6-6⅜x6½	W		1245		257-1400	241-1400				19.9	890-1400	♦4800		V4	
67	▲24G				6-6⅜x6½	W		1245		213-1200	198-1200				23.7	1010-600	4700		V4	
68	▲224G				6-6⅜x6½	W		1245		230-1400	214-1400				21.9	910-1000	4700		V4	
69	AAB-134	Own	M	DI	4-6x6½	W	4	735			134-1200	16.00		112	50.9	640-950		6825	V4	1.62-.500
70	BA-163	Own	M	DI	6-5¾x6½	W	4	1013			163-1200	16.00		98	49.1	825-600		8000	V4	1.62-.500
71	BB-179	Own	M	DI	6-6x6½	W	4	1103			179-1200	16.00		99	44.7	920-600		8000	V4	1.62-.500
72	ABA-184	Own	M	DI	6-5¾x6½	W	4	1013			184-1200	16.00		111	44.9	860-850		8265	V4	1.62-.500
73	BD-200		M		6-6⅜x6½	W		1245			200-1200					860-1200			V4	
74	ABB-205	Own	M	DI	6-6x6½	W	4	1103			205-1200	16.00		114	40.3	950-900		8265	V4	1.62-.500
75	ABD-227		M		6-6⅜x6½	W		1245			227-1200					970-1200			V4	
76	BBA-175	Own	M	DI	6-5¾x6½	W	4	1013			175-1400	16.00		90	45.6	760-1000		8000	V4	1.62-.500
77	BBB-192	Own	M	DI	6-6x6½	W	4	1103			192-1400	16.00		94	41.6	835-1000		8000	V4	1.62-.500
78	CBA-199	Own	M	DI	6-5¾x6½	W	4	1013			199-1400	16.00		103	41.5	850-1000		8265	V4	1.62-.500
79	CBB-222	Own	M	DI	6-6x6½	W	4	1103			222-1400	16.00		105	37.2	945-1000		8265	V4	1.62-.500
80	CBD-243		M		6-6⅜x6½	W		1245			243-1400					890-1400			V4	
81	BBD-216		M		6-6⅜x6½			1245			216-1400									

For abbreviations, see pages 190 and 191

For Directory of the Engine Manufacturers listed above, see Table of Contents

MARINE, RAILCAR, OR INDUSTRIAL USE—*continued*

VALVES	PISTON					PISTON PIN		CONNECTING RODS			MAIN BEARINGS		INJECTION SYSTEM							STARTING METHOD		OVERALL DIMENSIONS				
Exhaust Port Diameter and Lift (In.)	Material	Length (In.)	Weight with Rings and Pin (Lb.)	No. of Compression Rings	No. of Oil Rings	Diameter and Length (In.)	Locked In—	Materials (S. A. E. No.)	Center to Center Length (In.)	Weight with Cap and Bushing (Lb.)	Number	Diameter (In.)	Make of Pump	Make of Valve	Valve Type—Open or Closed	Orifices	Pressure—Nozzle Opening (Lb. per Sq. In.)	Air Cleaner—Make	Fuel Filter—Make	Make	Type	Length—Fan to Flywheel (In.)	Width (In.)	Height—To Top of Air Cleaner (In.)	Clutch Housing (S. A. E. Numbers)	Line Number
1.25-.369	AA	5.00	3.35	3	2	1.13-3.03	F	3140	8.00	2.72	5	2.50	A-R	AB	C	Mu	3000			LDA	Ele	31 11/32	22 1/8	33		1
1.25-.369	AA	5.00	3.70	3	2	1.13-3.34	F	3140	8.00	2.72	5	2.50	A-R	AB	C	Mu	3000	Opt	Opt	LDA	Ele	31 11/32	22 1/8	33		2
1.12-.375	Alu	4.84	4.47	4	2	1.18-3.70	F	CNM	8.00	5.31	5	3.00	AB	AB	C	Pi	1650			LDA	AEG	32 1/16 (2)	22 1/4	36	1,5	3
1.31-.375	Alu	4.84	3.58	3	2	1.18-3.20	F	CNM	8.00	5.31	7	3.00	AB	AB	C	Pi	1650			LDA	AEG	39 (2)	22 5/16	34 3/4	1,3	4
1.25-.369	AA	5.00	3.35	3	2	1.13-3.03	F	3140	8.00	2.72	7	2.50	A-R	AB	C	Mu	3000			LDA	Ele	40 7/32	22 1/8	35 1/4		5
1.25-.369	AA	5.00		3	2	1.13-3.34	F	3140	8.00	2.72	7	2.50	A-R	AB	C	Mu	3000					40 7/32	22 1/8	35 1/4		6
1.25-.395	Alu	4.84	4.47	3	2	1.50-3.62	F	CNM	8.50	7.00	7	3.50	AB	AB	C	Pi	1650			LDA	AEG	44 3/8 (2)	27	42 5/16	1,3	7
1.37-.395	Alu	6.84	7.93	4	2	1.62-3.93	F	CNM	9.37	8.59	7	3.50	AB	AB	C	Pi	1650			LDA	AEG	46 9/16 (2)	25 7/8	38 5/8	1,2	8
1.62-.500	Alu	7.53	12.34	4	2	2.00-4.65	F	CNM	12.00	13.75	7	4.50	AB	AB	C	Pi	2000			LDA	AEG	61 3/8 (2)	30 5/8	46 3/4	0,1	9
1.90-.500	Alu	7.53	12.60	4	2	2.00-4.90	F	CNM	12.00	13.75	7	4.50	AB	AB	C	Pi	2000			LDA	AEG	61 3/8 (2)	30	47 3/4	0,1	10
2.12-.500	Alu	7.53	12.90	4	2	2.00-5.40	F	CNM	13.25		5	4.50	AB	AB	C	Pi	2000			LD	AEG	56 3/8 (2)	42	55 3/4	0,1	11
2.12-.500	Alu	7.53	12.90	4	2	2.00-5.40	F	CNM	13.25		5	4.50	AB	AB	C	Pi	2000			LD	AEG	76 (2)	42	55 3/4	0,1	12
1.25-.369	AA	5.00	3.35	3	2	1.13-3.03	F	3140	8.00	2.72	4	2.50	B-R	AB	C	Mu	3000	Opt	Opt	LDA	Ele	26 13/32	22 5/16	32 1/4		13
1.25-.369	AA	5.00	3.70	3	2	1.18-3.34	F	3140	8.00	2.72	4	2.50	B-R	AB	C	Mu	3000	Opt	Opt	LDA	Ele	26 13/32	22 5/16	32 1/4		14
1.47-.500	AA	6.44	6.64	3	2	1.50-3.71	F	1040	11.00	8.88	5	4.13	Own	Own	C	Si	900	Don	Pur	Own	GS	41 1/2	24 5/16	53 1/16	1	15
1.53-.532	AA	6.19	7.36	4	2	1.62-4.09	F	1040	13.25	12.06	5	3.25	Own	Own	C	Si	900	Don	Pur	Own	GS	47 1/16	28 5/8	54 5/8	1	16
1.41-.532	AA	6.44	6.75	3	2	1.50-3.71	F	1040	11.00	8.88	7	3.56	Own	Own	C	Si	900	Don	Pur	Own	GS	56 3/4	30 1/4	55 7/8	1	17
1.53-.532	AA	6.19	7.53	4	2	1.62-4.10	F	1040	13.25	12.06	7	3.50	Own	Own	C	Si	900	Don	Pur	Own	GS	60 5/16	31 9/16	59	0	18
1.88-.625	AA	7.50	12.79	3	2	1.88-5.00	F	1040	13.25	15.81	7	4.12	Own	Own	C	Si	900	Don	Pur	Own	GS	71 1/16	32 1/8	81 5/8	0	19
1.88-.625	AA	7.50		3	2	1.88-5.00	F	1040	13.25	15.84	7	4.13	Own	Own	C	Si	900	Don	Pur	Own	E-G	70 1/16	32 15/16	55 1/8		20
.984-.406	AA	4.14		2	1	.875-2.95	F	1040	7.25	2.66	4	2.38	RM	AB	C	Si	1500	Don	Pur	DR	Ele	39 15/16	21 9/32	29 13/16		21
.984-.406	AA	3.78		2	1	.875-2.95	F	1040	7.25	2.66	4	2.38	RM	AB	C	Si	1500	Don	Pur	DR	Ele	39 15/16	21 9/32	29 13/16		22
													R-B	R-B			1707	MH	K	R-B	E-H	13 5/8	14 11/16	21 13/16		23
													R-B	R-B			1707	MH	K	R-B	E-H	26 11/32	22 11/32	29 7/8		24
1.69-.563	AA	5.64	7.07	3	2	1.63-4.22	F	4130	11.25	7.75	7	4.00	AB	AB	C	Mu	2300	Don	Pur	LDI	A-EI	53 1/2	26 1/2"	46 1/4	1	25
1.69-.563	AA	5.64	7.07	3	2	1.63-4.22	F	4130	11.25	7.75	7	4.00	AB	AB	C	Mu	2300	Don	Pur	LDI	A-EI	53 1/2	34"	46 1/2		26
1.15-.331	AA	3.50		3	2	.866-2.50	F	1035	7.64		3	2.16	R-B	R-B	C	Pi	1635	K-M	B-K	R-B	Ele	28 9/16	20 1/2	32 5/16		27
1.42-	AA	4.55		4	2	1.18-3.07	F	1035	9.06	4.14	7	2.76	R-B	R-B	C	Pi	1755	K-M	B-K	R-B	Ele	36 5/8	24 5/8	41 5/8		28
1.42-	AA	4.55		4	2	1.18-3.07	F	1035	9.06	4.14	7	2.76	R-B	R-B	C	Pi	1755	K-M	B-K	R-B	Ele	36 1/2	25 5/8	42 3/4		29
1.65-	AA			4	2	1.50-	F	1035	11.42	9.31	7	3.54	R-B	R-B	C	Pi	1690	MH	B-K	R-B	Ele	53 9/16	27 5/8	45 3/4		30
1.26-	AA	6.34		4	2	1.73-	F	1035	11.42	9.31	7	3.54	R-B	R-B	C	Pi	1920	MH	B-K	R-B	Ele	54 11/16	27 5/8	42 1/8		31
1.17-.470	AA	4.43	3.03	3	1	1.25-3.10	F	1041	8.75	3.12	3	(1)	AB	AB	C	Pi	1800	Don	Own	DR	Ele	35	20	38 7/8		32
1.38-.495	AA	5.06	4.72	3	2	1.50-3.62	F	1041	10.00	6.96	3	2.91	AB	AB	C	Pi	1800	Don	Own	DR	Ele	42 3/4	24 7/8	40 5/8	2,3	33
1.38-.495	AA	5.06	5.37	3	2	1.50-3.88	F	1041	10.00	6.96	3	2.91	AB	AB	C	Pi	1800	Don	Own	DR	Ele	39 1/2	39 5/8	24		34
1.38-.495	AA	5.06	4.72	3	2	1.50-3.62	F	1041	10.00	6.96	4	2.91	AB	AB	C	Pi	1800	Don	Own	DR	Ele	57	24 5/8	42 5/8	1,2,3	35
1.62-.500	CI	7.75	22.2	4	2	2.12-4.73	F	1045	12.50	17.75	5	4.00	Own	Own		Mu		Don	Own		Ele	58 11/16	29 1/8	62 7/8	0	36
1.62-.500	CI	7.75	22.2	4	2	2.12-4.73	F	1045	12.50	17.75	5	4.00	Own	Own		Mu		Don	Own		Ele	58 11/16	29 1/8	62 7/8	0	37
1.62-.500	CI	7.75	22.2	4	2	2.12-4.73	F	1045	12.50	17.75	5	4.00	Own	Own		Mu		Don	Own		Ele	58 11/16	29 1/8	62 7/8	0	38
1.62-.500	CI	7.75	23.7	4	2	2.12-4.98	F	1045	12.50	17.75	5	4.00	Own	Own		Mu		Don	Own		Ele	58 11/16	29 1/8	62 7/8	0	39
1.62-.500	CI	7.75	23.7	4	2	2.12-4.98	F	1045	12.50	17.75	5	4.00	Own	Own		Mu		Don	Own		Ele	58 11/16	29 1/8	62 7/8	0	40
1.37-.500	CI	7.75	19.7	4	2	2.12-4.73	F	1045	12.50	17.75	7	4.00	Own	Own		Mu		Don	Own		Ele	75 1/16	37	60 1/2	00	41
							F				7	4.00	Own	Own							Ele	75 1/16	37	77 1/4		42
1.37-.500	CI	7.75	19.7	4	2	2.12-4.73	F	1045	12.50	17.75	7	4.00	Own	Own		Mu		Don	Own		Ele	75 1/16	37	54 15/16	00	43
1.62 .500	CI	7.75	22.2	4	2	2.12-4.73	F	1045	12.50	17.75	7	4.00	Own	Own		Mu		Don	Own		Ele	76 1/8	37	60 1/2	00	44
							F				7	4.00	Own	Own							Ele	75 1/16	37	77 1/4		45
1.62-.500	CI	7.75	22.2	4	2	2.12-4.73	F	1045	12.50	17.75	7	4.00	Own	Own		Mu		Don	Own		Ele	76 1/8	37	54 15/16	00	46
1.62-.500	CI	7.75	23.7	4	2	2.12-4.98	F	1045	12.50	17.75	7	4.00	Own	Own		Mu		Don	Own		Ele	76 1/8	37	77 1/4	00	47
1.62-.500	CI	7.75	23.7	4	2	2.12-4.98	F	1045	12.50	17.75	7	4.00	Own	Own		Mu		Don	Own		Ele	76 1/8	37	54 15/16	00	48
1.62-.500	CI	7.75	22.2	4	2	2.12-4.73	F	1045	12.50	17.75	5	4.00	Own	Own		Mu		Don	Own		Ele	58 11/16	29 1/8	62 7/8	0	49
1.62-.500	CI	7.75	22.2	4	2	2.12-4.73	F	1045	12.50	17.75	5	4.00	Own	Own		Mu		Don	Own		Ele	58 11/16	29 1/8	62 7/8	0	50
1.62-.500	CI	7.75	23.7	4	2	2.12-4.98	F	1045	12.50	17.75	5	4.00	Own	Own		Mu		Don	Own		Ele	58 11/16	29 1/8	62 7/8	0	51
1.62-.500	CI	7.75	23.7	4	2	2.12-4.98	F	1045	12.50	17.75	5	4.00	Own	Own		Mu		Don	Own		Ele	58 11/16	29 1/8	62 7/8	0	52
1.37-.500	CI	7.75	19.7	4	2	2.12-4.73	F	1045	12.50	17.75	7	4.00	Own	Own		Mu		Don	Own		Ele	77 9/16	37	60 1/2	0	53
1.37-.500	CI	7.75	19.7	4	2	2.12-4.73	F	1045	12.50	17.75	7	4.00	Own	Own		Mu		Don	Own		Ele	77 9/16	37	54 15/16	0	54
1.62-.500	CI	7.75	22.2	4	2	2.12-4.73	F	1045	12.50	17.75	7	4.00	Own	Own		Mu		Don	Own		Ele	77 9/16	37	60 1/2	0	55
1.62-.500	CI	7.75	22.2	4	2	2.12-4.73	F	1045	12.50	17.75	7	4.00	Own	Own		Mu		Don	Own		Ele	77 9/16	37	54 15/16	0	56
1.62-.500	CI	7.75	23.7	4	2	2.12-4.98	F	1045	12.50	17.75	7	4.00	Own	Own		Mu		Don	Own		Ele	77 9/16	37	60 1/2	0	57
1.62-.500	CI	7.75	23.7	4	2	2.12-4.98	F	1045	12.50	17.75	7	4.00	Own	Own		Mu		Don	Own		Ele	77 9/16	37	54 15/16	0	58
											7	4.00									Ele	75 1/16	37	77 1/4		59
											7	4.00									Ele	76 1/8	37	64 1/4		60
											7	4.00									Ele	76 1/8	37			61
											7	4.00									Ele	77 9/16	37			62
											7	4.00									Ele	77 9/16	37			63
											7	4.00									Ele	77 9/16	37			64
											7	4.00									Ele	77 9/16	37	64 1/4		65
											7	4.00									Ele	77 9/16	37			66
							F	DFS			7	4.00									Ele	77 9/16	38	63		67
							F	DFS			7	4.00									Ele	77 9/16	38	63		68
1.62-.500	CI	7.75	23.7	4	2	2.12-4.98	F	1045	12.50	17.75	5	4.00	Own	Own		Mu		Don	Own		Ele	58 11/16	29 1/8	62 7/8	0	69
1.62-.500	CI	7.75	22.2	4	2	2.12-4.73	F	1045	12.50	17.75	7	4.00	Own	Own		Mu		Don	Own		Ele	76 1/8	37	60 1/2	00	70
1.62-.500	CI	7.75	23.7	4	2	2.12-4.98	F	1045	12.50	17.75	7	4.00	Own	Own		Mu		Don	Own		Ele	76 1/8	37	77 1/4	00	71
1.62-.500	CI	7.75	22.2	4	2	2.12-4.73	F	1045	12.50	17.75	7	4.00	Own	Own		Mu		Don	Own		Ele	76 1/8	37	54 15/16	00	72
											7	4.00									Ele	76 1/8	37	64 1/4		73
1.62-.500	CI	7.75	23.7	4	2	2.12-4.98	F	1045	12.50	17.75	7	4.00	Own	Own		Mu		Don	Own		Ele	76 1/8	37	54 15/16	00	74
											7	4.00									Ele	76 1/8	37			75
1.62-.500	CI	7.75	23.2	4	2	2.12-4.73	F	1045	12.50	17.75	7	4.00	Own	Own		Mu		Don	Own		Ele	77 9/16	37	60 1/2	0	76
1.62-.500	CI	7.75	23.7	4	2	2.12-4.98	F	1045	12.50	17.75	7	4.00	Own	Own		Mu		Don	Own		Ele	77 9/16	37	60 1/2	0	77
1.62-.500	CI	7.75	22.2	4	2	2.12-4.73	F	1045	12.50	17.75	7	4.00	Own	Own		Mu		Don	Own		Ele	77 9/16	37	54 15/16	0	78
1.62-.500	CI	7.75	23.7	4	2	2.12-4.98	F	1045	12.50	17.75	7	4.00	Own	Own		Mu		Don	Own		Ele	77 9/16	37	54 15/16	0	79
											7	4.00									Ele	77 9/16	37			80
																										81

For abbreviations, see pages 190 and 191

For Directory of the Engine Manufacturers listed above, see Table of Contents

1959 DIESEL ENGINES FOR TRUCK, BUS, TRACTOR,

Line Number	Engine Make and Model	Built Under License from	GENERAL: Designed for	Type	Number of Cylinders Bore and Stroke (In.)	Cylinder Liners—Type	Cycle	Piston Displacement (Cu. In.)	With Bare Engine: Maximum Brake Hp. at Specified R.P.M.	With Standard Accessories: Max. Intermittent Hp. at Specified R.P.M.	With Standard Accessories: Continuous Sustained Hp. at Specified R.P.M.	Compression Ratio—to 1	Max. Combustion Pressure (Lb. per Sq. In.)	B.M.E.P. at Continuous Hp. (Lb. per Sq. In.)	Weight per Continuous Hp (Lb.)	Max. Torque in Lb. Ft. at Specified R.P.M.	Shipping Weight (Lb.): Automotive or Industrial	Shipping Weight (Lb.): Marine	VALVES: Arrangement	VALVES: Intake Port Diameter and Lift (In.)
1	Oliver 950 DSL	Lanova	Tr	EC	6-4x4	D	4	302		65-1675	55-1675	15.50	480	86	17.5	230-1200	961		VI	1.38- .344
2	Super 166D	Lanova	I	EC	4-3⅝x3¾	W	4	155				15.50	480				620		VI	1.31- .360
3	Super 177D	Lanova	I	EC	6-3½x3¾	W	4	216		44-2000	39-1800	15.50	480	80	20.1	165-1200	784	870	VI	1.25- .344
4	Super 188D	Lanova	I	EC	6-3¾x4	W	4	265		54-2000	48-1800	15.50	480	88	19.1	203-1200	916	920	VI	1.38- .344
5	Super 199D	Lanova	I	EC	6-4x4	D	4	302		66-2000	57-1800	15.50	480	86	17.2	230-1200	981	1240	VI	1.38- .344
6	Super 225D		I	TC	6-4⅝x5¼	D	4	529	130-1800	110-1800	100-1800	15.00	750	95	23.4	400-1200	2344		VI	2.00- .955
7	550DSL	Lanova	Tr	EC	4-3⅝x3¾	W	4	155				15.50					516		VI	1.31- .360
8	770DSL	Lanova	Tr	EC	6-3½x3¾	W	4	216		53-1750	42-1750	15.50				135-1400	652		VI	1.17- .313
9	880DSL	Lanova	Tr	EC	6-3¾x4	W	4	265		65-1750	52-1750	15.50				166-1300	720		VI	1.37- .344
10	Onan DSP		I	PC	1-3½x3½	N	4	33.7		5.79-2000	5.5-1800	17.30		66	67.3	14.7-1800	370		I	1.31- .271
11	DRP		I	PC	2-3½x3½	N	4	67.3		14.8-2400	11-1800	17.30		77	49.4	34.2-2100	543		I	1.31- .271
12	DSL		I	PC	1-3½x4	N	4	38.5		7.7-1800	7.7-1800	18.00		86	56.1	21.8-1800	432		VI	1.31- .355
13	MDSL		M	PC	1-3½x4	N	4	38.5		7.7-1800	7.7-1800	18.00		86	62.0	21.8-1800		477		1.31- .355
14	DRN		I	PC	2-3½x3½		4	67.4	16.5-2100	16.5-2100	14.8-1800	17.20		95	36.4	42.3-1800	538		HI	1.31- .355
15	P&H 287C-18		Tr,M,I	DI	2-4½x5½	W	2	174	95-1800	82-1800	66-1800	17.00	1200	73	14.8▲	270-1200	975	1635	VI	No Valves
16	387C-18T		T,B,Tr,M,I	DI	3-4½x5½	W	2	261	165-1800	132-1800	115-1800	17.00	1200	96	10.8▲	508-1500	1240	2170	VI	No Valves
17	487C-18T		T,B,Tr,M,I	DI	4-4½x5½	W	2	348	230-1800	183-1800	160-1800	17.00	1200	101	9.7▲	680-1600	1550	2580	VI	No Valves
18	687C-18T		T,B,Tr,M,I	DI	6-4½x5½	W	2	522	325-1800	260-1800	230-1800	17.00	1200	96	8.2▲	950-1600	1890	3070	VI	No Valves
19	Red Wing D4-45	Wau	M	TC	4-3½x3¾	W	4	144	45-2400	40-2400	32-2000	17.00	850	88	45.6	90-1400		1460	VI	1.25- .312
20	D6-100	Wau	M	TC	6-4x4	D	4	302	100-2600	90-2400	80-2000	17.00	750	105					VI	1.38- .344
21	D6-140	Wau	M	TC	6-4¼x5	D	4	426	140-2400	120-2200	100-2000	17.00		93						1.75- .451
22	D6-160		M	TC	6-5¼x6	W	4	779	168-2000	138-2000	102-1400	17.50	750	80	42.2	600-1000		4310	VI	2.25- .500
23	D6-200		M	TC	6-6¼x6½	W	4	1197	225-1600	185-1600	152-1300	16.50	750	83	42.2	845-1000		4310	VI	2.37- .656
24	Sheppard 17B		Tr,M,I	PC	2-3½x4	W	4	77	25-1800		17-1800	22.00		99	25.6▲	56-1100	435	490	VI	1.37- .209
25	19B		M,I	PC	4-3½x4	W	4	154	50-1800		35-1800	22.00		99	17.1▲	116-1100	600	770	VI	1.37- .209
26	16B		Tr,M,I	PC	4-4½x5	W	4	319	88-1800		62-1800	22.00		86	17.7▲	216-1100	1100	1600	VI	1.56- .218
27	Sterling VD6		M,R,I	DI	6-8x9	W	4	2714		330-1200	325-1200	14.00	1000	80	28.2▲	1685-1000	9160	8850	VI	2.37- .728
28	VDS6S		M,R,I	DI	6-8x9	W	4	2714	750-1200†	660-1200	563-1200	11.35	1340	137	17.4▲		9775	12770	VI	2.37- .728
29	VDS8S		M,R,I	DI	8-8x9	W	4	3619	1000-1200†	850-1200	750-1200	11.35	1340	137	16.2▲	3310-1000	12100	17000	VI	2.37- .728
30	Superior 40-6		M,I	DI	6-8½x10½	W	4	3575			425-1000	12.20	800	80	44.5▲		14500	16000	VI	3.12- .875
31	40-X-6		M,I	DI	6-8½x10½	W	4	3575			700-1000	12.20	900	120	31.6▲		15500	17000	VI	3.12- .775
32	40L		R	DI	6-8½x10½	W	4	3575			375-1100	12.00	800	76	50.6		19000		V4	3.06- .697
33	40LX		R	DI	6-8½x10½	W	4	3575			500-1100	12.00	860	102	46.0		23000		V4	3.06- .620
34	40ALX		R	DI	6-8½x10½	W	4	3575			675-1100	12.00	1200	136	34.1		23000		V4	3.06- .620
35	40C-LX-6		—		6-8½x10½	W	4	3575			675-1100			136	22.4		15100		VI	3.63-
36	40C-LX-8		M,R,I	DI	8-	W	4	4767			900-1100			136	20.5		18410		VI	3.63-
37	40-SX-8		M,I	DI	8-8½x10½	W	4	4767			900-1000			156	22.2▲		20000	19500	VI	3.94-
38	Waukesha 180-DLC		T,Tr,I	TC	4-3½x3¾	W	4	144	45-2400	41-2400	31-2000	17.00	750	71	18.3	102-1800	475		VI	1.25- .312
39	185-DLC		T,Tr,I	TC	4-3½x3¾	W	4	216	60-2400	54-2400	44-2000	17.00	750	69	18.1	152-1000	800		VI	1.25- .312
40	190-DLCA		T,Tr,I	TC	6-3¾x4	W	4	265	84-2800	76-2800	58-2000	17.00	750	69	18.9	191-1400	868		VI	1.37- .349
41	195-DLCA		T,Tr,I	TC	6-4x4	D	4	302	98-2800	88-2800	67-2000	17.00	750	81	15.6	221-1800	965		VI	1.56- .344
42	135-DKB		T,B,Tr	TC	6-4¼x5	D	4	426	147-2800	132-2800	99-2000	17.50	750	88	16.3	328-1600	1386		VI	- .456
43	°135-DKBS		T,B,Tr	TC	6-4¼x5	D	4	426	185-2800	166-2800	121-2000	17.50	750	112	12.3	400-1800	1486		VI	1.75- .456
44	148-DKB		T,B	TC	6-5¼x6	W	4	779	200-2100	180-2100	147-1800	17.50	750	79	16.4	584-1000	2320		VI	2.25- .477
45	°148-DKBS		T,B	TC	6-5¼x6	W	4	779	280-2100	252-2100	194-1800	17.50	750	110	12.6	706-1800	2445		VI	2.25- .477
46	WAKDB		T,I	TC	6-6¼x6½	W	4	1197	258-1800	232-1800	195-1600	16.50	750	69	22.8	840-1000	3300		VI	2.37- .656
47	°WAKDBS		T,I	TC	6-6¼x6½	W	4	1197	400-1800	360-1800	296-1600	16.50	750	101	13.3	1062-1600	3925		VI	2.37- .656
48	NKDB		I	TC	6-7x8½	W	4	1905	297-1200	267-1200	238-1200	17.00	750	76	43.6	1383- 600	9285		VI	2.87- .709
49	°NKDBS		I	TC	6-7x8½	W	4	1905	390-1200	351-1200	312-1200	17.00	750	99	30.2	1730-1000	9435		VI	2.87- .709
50	LRDBC		I	TC	6-8½x8½	W	4	2894	415-1200	373-1200	332-1200	15.00	750	77	34.3	2160- 600	10300		VI	3.25- .704
51	LRDBCS		I	TC	6-8½x8½	W	4	2894	695-1200	625-1200	556-1200	15.00	750	100	26.9	3580- 800	10450		VI	3.25- .704
52	VLRDB		I	TC	12-8½x8½	W	4	5788	830-1200	747-1200	664-1200	17.00		92	19.5	4330- 600	15500		VI	3.25-
53	°VLRDBS		I	TC	12-8½x8½	W	4	5788	1235-1200	1110-1200	988-1200	17.00		80	14.9	5070- 900	16300		VI	3.25-
54	197-DLC		T,B,Tr,M,I	PC	6-4x4	D	4	302	91-2800	82-2800	65-2000	18.50		85	12.3	216-1600	890			- .344
55	197-DLCS		T,B,Tr,M,I	PC	6-4x4	D	4	302	131-2800	118-2800	84-2000	18.50		110	10.1	275-1800	850		VI	- .344
56	Witte AD		I	PC	1-3¼x4½	W	4	37.3	4.8-1200	4.12-1200	3.75-1200	18.00	700	82	211	21-1200	798		VI	1.31- .320
57	BD		I	PC	1-4¼x6	W	4	85.1	10- 900	8.5- 900	7.75- 900	16.50	700	82	173	58- 900	1320		VI	1.56- .406
58	CD		I	PC	1-5x8	W	4	157	15.5- 750	13.75-750	12.5- 750	16.70	700	84	149	112- 750	1860		VI	2.13- .531
59	100		Tr,M,R,I	PC	2-4x4	W	4	101	23.8-1800		19-1800	20.00	800	83	44.7	69-1800	850		HI	1.56- .332

ABBREVIATIONS

■—Without fan or muffler.
▲—Based on automotive or industrial weight.
°—Turbocharged.
•—Bottom of gear box to top of heat exchanger.
‡—Including base.
ǂ—Includes radiator.
*—146-2000 for buses.
†—With all accessories.
‡‡—Bottom of base to highest point on engine.
^—Includes reverse and reduction gear.
^—Dual fuel engine; diesel oil or natural gas.
°—Based on standard truck engine.
††—Air cooled.

(1)—Front and center, 2.75; rear, 3.00.
(2)—Fan to flywheel housing.
(4)—To engine center line.
(5)—All models are available with governed speed of 1400 RPM.
(12)—From bottom of pan to air cleaner mounting flange.
(15)—Including radiator and gear box.
A—Air.
AA—Aluminum alloy.
AB—American Bosch.
AC—AC Spark Plug Co.
A-C—Allis-Chalmers Mfg. Co.
ACB—AC or Bosch.
A-D—AC and Donaldson.
AE—Air or electric.
AEG—Air, electric or auxiliary gasoline engine.

AEI—Air, electric or inertia.
A-EI—Air or Electric.
AI—Auto-Lite (electric), Ingersoll-Rand (air).
AL—Electric Auto-Lite Co.
Alu—Aluminum.
AM—Air-Maze Corp.
AMD—Air Maze or Donaldson.
AR—Airtex.
A-R—American Bosch or Roosa Master.
AS—Air-swirl, direct injection.
AT—Arma steel, tin plated.
B—Buses.
BB—Bendix or Bosch.
B-D—Bosch or Demco.
B-F—Bosch and Fram.
B-K—Bosch or Knecht.
B-R—Bosch or Roosa.
BS—Bosch or Scintilla.

Bur—Burgess.
C—Closed.
Cb—Commercial and Bosch.
CB—Cuno and Bosch.
C-F—Commercial or Fram.
CI—Cast Iron.
CNM—Chrome-nickel molybdenum.
Com—Commercial Filters Corp.
Cont—Continental Motors Corp.
Cr—Cars.
CR—Cedar Rapids.
Cun—Cuno Engineering Corp.
D—Dry liners used.
DA—Delco-Remy and Auto-Lite.
DeL—DeLuxe Products Corp.
Dem—Demco.
DFS—Drop forged steel.
DI—Direct injection.
Dir—Ductile iron.
D-M—Donaldson or Air Maze.

For Directory of the Engine Manufacturers listed above, see Table of Contents

MARINE, RAILCAR, OR INDUSTRIAL USE—*concluded*

Valves: Exhaust Port Diameter and Lift (In.)	Piston: Material	Piston: Length (In.)	Piston: Weight with Rings and Pin (Lb.)	Piston: No. of Compression Rings	Piston: No. of Oil Rings	Piston Pin: Diameter and Length (In.)	Piston Pin: Locked In—	Connecting Rods: Materials (S. A. E. No.)	Connecting Rods: Center to Center Length (In.)	Connecting Rods: Weight with Cap and Bushing (Lb.)	Main Bearings: Number	Main Bearings: Diameter (In.)	Injection System: Make of Pump	Injection System: Make of Valve	Injection System: Valve Type—Open or Closed	Injection System: Orifices	Injection System: Pressure—Nozzle Opening (Lb. per Sq. In.)	Air Cleaner—Make	Fuel Filter—Make	Starting Method: Make	Starting Method: Type	Overall Dimensions: Length—Fan to Flywheel (In.)	Overall Dimensions: Width (In.)	Overall Dimensions: Height—To Top of Air Cleaner (In.)	Clutch Housing (S. A. E. Numbers)	Line Number
1.18- .344	AA	4.44	......	3	1	1.25-3.44	F	1045	6.75	3.75	4	2.63	AB	AB	C	Pi	1750	Don	Fra	DR	Ele	41	21 1/4	33 7/32	......	1
1.12- .360	AA	3.75	......	3	1	1.25-2.75	F	1045	6.75	......	3	2.25	AB	AB	C	Pi	1750	Don	F-A	DR	Ele	31 5/32	22	34 13/32	......	2
1.13- .344	AA	3.75	3.25	3	1	1.25-2.75	F	1045	6.75	2.69	4	2.25	AB	AB	C	Pi	1750	Don	Fra	DR	Ele	40 9/32	22	33 13/32	4	3
1.18- .344	AA	4.19	5.44	3	1	1.25-3.00	F	1045	6.75	2.94	4	2.63	AB	AB	C	Pi	1750	Don	Fra	DR	Ele	41 57/64	22	34 5/16	3	4
1.18- .344	AA	4.44	......	3	1	1.25-3.44	F	1045	6.75	3.75	4	2.63	AB	AB	C	Pi	1750	Don	Fra	DR	Ele	43 9/16	22	34 13/32	3	5
1.37- .395	AA	6.84	8.90	4	2	1.63-3.94	F	CNM	9.37	8.59	7	3.50	RM	AB	C	Pi	1650	Don	Com	DR	Ele	49 5/16	27 1/8	48 5/8	......	6
1.12- .360	AA	3.75	......	3	1	1.25-2.75	F	1045	6.75	2.69	3	2.25	AB	AB	C	Pi	1750	Don	F-A	DR	Ele	30 7/8	18 1/2	32 1/4	......	7
1.05- .281	AA	3.75	......	3	1	1.25-2.75	F	1045	6.75	2.69	4	2.25	AB	AB	C	Pi	1750	Don	F-A	DR	Ele	39 7/8	18 1/2	31 1/4	......	8
1.03- .344	AA	4.19	......	3	1	1.25-3.00	F	1045	6.75	2.94	4	2.63	AB	AB	C	Pi	1750	Don	F-A	DR	Ele	41 1/2	18 1/2	33 3/4	......	9
1.22- .265	Van	4.13	2.25	3	2	1.25-3.25	F	1040	6.13	2.61	2	2.75	Dem	Dem	C	Pi	1800	Don	Fra	Own	Ha	22 3/8	21 5/8	31 7/16	......	10
1.22- .265	Van	4.13	2.25	3	2	1.25-3.25	F	1040	6.13	2.61	2	2.75	Dem	Dem	C	Pi	1800	Don	Fra	AL	Ele	23	30 1/4	27	......	11
1.22- .355	Van	4.13	2.73	3	1	1.25-3.25	F	1040	6.13	2.61	2	2.75	Dem	Dem	C	Pi	1750	Fra	Fra	Own	Ele	20 1/16	22	26 3/16	......	12
1.22- .355	Van	4.13	2.73	3	1	1.25-3.25	F	1040	6.13	2.61	2	2.75	Dem	Dem	C	Pi	1750	Don	Fra	Own	Ele	14 3/32	22	26 1/16	......	13
1.22- .355	Van	4.13	......	3	1	1.25-3.25	F	1040	6.13	2.61	2	2.75	A-C	A-C	C	Pi	1775	Don	Fra	AL	Ele	23 1/8	30 1/4	27	......	14
2.30- .550	AA	6.35	7.13	4	2	....	...	4140	11.84	8.40	3	4.00	RM	B-D	C	Si	2200	D-M	Ff	Al	A-El	34 1/4	28 1/4	40 7/8	1	15
2.30- .550	AA	6.35	7.13	4	2	....	...	4140	11.84	8.40	4	4.00	RM	B-D	C	Si	2200	D-M	Ff	Al	A-El	43	28 1/4	52 1/16	1	16
2.30- .550	AA	6.35	7.13	4	2	....	...	4140	11.84	8.40	4	4.00	RM	B-D	C	Si	2200	D-M	Ff	Al	A-El	45 3/8	28 1/4	52 1/16	1	17
2.30- .550	AA	6.35	7.13	4	2	....	...	4140	11.84	8.40	4	4.00	RM	B-D	C	Si	2200	D-M	Ff	Al	A-El	59 7/8	28 1/4	52 1/16	1	18
1.00- .281	CI	4.75	3.28	3	2	1.25-2.75	F	1045	6.75	1.97	3	2.25	AB	AB	C	Pi	1800	Opt	Opt	DR	Ele	42 7/8	24 3/8	29 5/8	2	19
1.18- .344	AA	4.18	2.75	3	2	1.25-3.44	F	1045	6.75	4.00	4	2.63	AB	......	...	SP	1800	N	B-F	DR	Ele	59 1/4	26	32	......	20
1.50- .375	AA	4.94	4.30	3	1	1.50-3.63	F	1045	9.50	5.75	7	3.25	AB	......	...	...	1800	......	B-F	DR	Ele	62	24 1/2	35	......	21
1.81- .531	Alu	7.25	......	4	2	1.87-4.50	F	4145	11.75	......	7	4.25	AB	AB	C	Pi	2000	Opt	Com	DR	Ele	74 5/8	32 1/16	47 5/16	0	22
2.00- .656	Alu	......	......	3	2	2.18-5.37	F	4145	13.25	......	7	4.75	AB	AB	C	Pi	2000	Opt	Com	DR	Ele	88 1/16	34 7/8	51 13/16	0	23
1.25- .209	CI	3.81	3.19	3	2	1.06-2.93	F	Dlr	7.12	2.44	3	1.99	Own	Own	O	Si	3	AMD	Fra	AL	E-H	22 1/4	18	26	5	24
1.25- .209	CI	3.81	3.19	3	2	1.06-2.93	F	Dlr	7.12	2.44	5	1.99	Own	Own	O	Si	3	AMD	Fra	AL	E-H	32 1/4	18	26	5	25
1.56- .218	CI	5.48	6.88	3	2	1.50-3.75	F	Dlr	10.87	5.19	5	3.18	Own	Own	O	Si	3	AMD	Fra	AL	Ele	40 11/16	21 1/4	38 1/16	3	26
2.37- .728	Alu	10.25	30.59	4	2	3.00-6.93	F	4340	18.00	46.05	7	6.00	BB	BB	C	Mu	3000	Opt	Cun	LN	A-El	......	......	......	00	27
2.37- .728	AA	9.62	26.25	4	1	3.00-6.93	F	4340	18.00	46.05	7	6.00	AB	AB	C	Mu	3300	AM	Cun	LN	Ele	114 1/4	39 1/4	64	00	28
2.37- .728	AA	9.62	26.25	4	1	3.00-6.93	F	4340	18.00	46.05	9	6.00	AB	AB	C	Mu	3300	AM	Cun	LN	Ele	134 1/2	39 1/4	64	00	29
3.12- .875	CI	13.69	86.20	4	3	3.50-7.00	F	1045	21.00	75.00	7	6.00	B-D	B-D	C	Mu	2500	AM	Pur	Own	A	112	40	70	......	30
3.12- .775	CI	13.69	86.20	4	3	3.50-7.00	F	1045	21.00	75.00	7	6.00	B-D	B-D	C	Mu	3300	AM	Pur	Own	A	148	48	70	......	31
3.06- .697	CI	11.72	73.10	4	3	3.50-7.00	F	1045	21.00	67.10	7	6.00	BB	BB	C	Mu	3000	AM	Pur	Opt	Ele	129	56	74	......	32
3.06- .620	CI	11.72	73.10	4	3	3.50-7.00	F	1045	21.00	67.10	7	6.00	BB	BB	C	Mu	3500	AM	Pur	Opt	Ele	148	56	74	......	33
3.06- .620	CI	11.72	73.10	4	3	3.50-7.00	F	1045	21.00	67.10	7	6.00	BB	BB	C	Mu	3500	AM	Pur	Opt	Ele	148	56	74	......	34
3.38-......	CI	12.30	......	4	2	3.50-3.50	F	....	......	......	6	5.75	BB	......	...	......	......	AM	Pur	Own	A	154 7/16	57	89 1/4	......	35
3.38-......	CI	12.30	......	4	2	3.50-3.50	F	....	......	......	8	5.75	BB	......	...	......	......	AM	Pur	Own	A	188 13/16	59 7/16	83 11/32	......	36
3.06-......	CI	12.50	......	4	2	3.50-7.00	F	1045	21.00	......	9	6.00	BB	BB	C	Mu	......	AM	Pur	Own	A	128 1/2	47 3/4	70	......	37
1.00- .281	AA	4.75	......	3	2	1.25-2.75	F	1045	6.75	......	3	2.25	AB	AB	C	Pi	1800	Opt	Opt	Opt	Ele	30 7/8	19	27 3/4	4	38
1.00- .281	AA	4.18	......	3	2	1.25-2.75	F	1045	6.75	......	4	2.25	AB	AB	C	Pi	1800	Opt	Opt	Opt	Ele	40 3/4	22	29	3	39
1.12- .349	AA	4.18	......	3	2	1.25-3.00	F	1045	6.75	......	4	2.63	AB	AB	C	Pi	1500	Opt	Opt	Opt	Ele	42 5/8	22	29	3	40
1.37- .344	AA	4.43	......	3	2	1.25-3.43	F	1045	6.75	......	4	2.63	AB	AB	C	Pi	1500	Opt	Opt	Opt	Ele	43	25 3/4	30	3	41
1.50- .375	AA	4.94	......	3	1	1.50-3.62	F	1045	9.50	......	7	3.25	AB	AB	C	Pi	1800	Opt	Opt	Opt	Ele	47 3/8	26	34 1/2	3	42
1.50- .375	AA	4.94	......	3	1	1.50-3.62	F	1045	9.50	......	7	3.25	AB	AB	C	Pi	1800	Opt	Opt	Opt	Ele	47 3/8	26	41 1/8	3	43
1.81- .507	AA	7.25	......	4	2	1.87-4.50	F	4145	11.75	......	7	4.50	AB	AB	C	Pi	2000	Opt	Opt	DRW	E-G	55 7/8	28 1/2	47 1/8	0,1	44
1.81- .507	AA	7.25	......	4	2	1.87-4.50	F	4145	11.75	......	7	4.50	AB	AB	C	Pi	2000	Opt	Opt	DRW	E-G	55 7/8	28 1/2	55 1/4	0,1	45
2.00- .656	AA	8.37	......	2	2	2.18-5.37	F	4145	13.25	......	7	4.75	AB	AB	C	Pi	2000	Opt	Opt	DRW	E-G	66 3/8	33	50 7/8	0	46
2.00- .656	AA	8.37	......	4	2	2.18-5.37	F	4145	13.25	......	7	4.75	AB	AB	C	Pi	2000	Opt	Opt	DRW	E-G	66 3/8	33	62 1/2	0	47
2.50- .709	AA	9.75	......	2	2	2.50-6.03	F	4145	15.38	......	7	5.25	AB	AB	C	Pi	2000	Opt	Opt	Own	G	78 7/8	48	60 1/4	00	48
2.50- .709	AA	9.75	......	4	2	2.50-6.03	F	4145	15.38	......	7	5.25	AB	AB	C	Pi	2000	Opt	Opt	Own	G	78 7/8	48	60 1/4	00	49
2.75- .704	AA	11.34	......	4	1	3.00-7.00	F	4145	21.38	......	7	5.50	AB	AB	C	Pi	2000	Opt	Opt	Own	G	97 1/2	49 1/8	69 5/8	00	50
2.75- .704	AA	11.34	......	4	2	3.00-7.00	F	4145	21.38	......	7	5.50	AB	R-B	C	Pi	2000	Opt	Opt	Own	G	113 1/2	49 1/8	69 5/8	0	51
2.75-......	AA	......	......	4	2	3.00-7.00	F	4145	18.00	......	7	6.25	AB	......	...	Pi	......	......	......	Own	G	130	67	75 1/2	......	52
2.75-......	AA	......	......	4	2	3.00-7.00	F	4145	18.00	......	7	6.25	AB	......	...	Pi	......	......	......	Own	G	130	67	75 1/2	......	53
....- .344	Alu	4.19	......	...		1.25-3.44	F	1045	6.75	......	7	2.63	RM	AB	C	Pi	1850	......	Fra	DR	Ele	44 7/32	22 1/2	32 13/16	......	54
....- .344	Alu	4.19	......	3	2	1.25-3.44	F	1045	6.75	......	7	2.63	RM	AB	C	Pi	1850	......	Fra	DR	Ele	44 7/32	24 3/4	39 1/8	......	55
1.19- .320	AA	4.44	2.25	4	1	1.25-2.72	F	1045	8.50	3.23	2	TR	AB	AB	C	Pi	1900	Uni	AR	AL	E-H	20 3/4	25 1/2	36 11/32	......	56
1.56- .406	CI	7.31	11.25	4	1	1.75-3.50	F	1035	15.00	8.25	2	TR	AB	AB	C	Pi	1600	Uni	AR	AL	E-H	45 1/8	38 9/16	41 1/2	......	57
1.88- .531	CI	8.19	15.18	4	2	1.81-4.22	F	1035	18.00	18.75	2	TR	AB	AB	C	Pi	1900	Uni	AR	AL	E-H	53 11/32	46 9/16	48 11/32	......	58
1.56- .332	AA	4.75	3.50	4	2	1.44-3.38	F	1035	8.00	5.75	2	3.00	RM	AB	C	Pi	1800	Vor	Com	DA	Ele	30 1/8	39 1/4	25 11/32	......	59

D-N—Delco-Remy or Novo.
Don—Donaldson Co.
D-P—Donaldson or Purolator.
DR—Delco-Remy Div.
DRW—Delco or Waukesha.
DS—Delco-Remy and Schwitzer.
EC—Energy cell.
E-G—Electric or auxiliary gasoline engine.
E-H—Electric or hand.
Ele—Electric.
F—Floating.
FA—Fram or American Bosch.
Ff—Fulflo. **Fra**—Fram Corp.
G—Auxiliary gasoline engine. General purpose.
GS—Gasoline and spark ignition.
Ha—Hand.
Hes—Hesselman.
HI—Horizontally In-head.
I—Industrial. **K**—Knecht.
K-M—Knecht or Mann & Hummel.
LB—Leece Neville or Buda.
L-D—Leece Neville or Delco-Remy.
LDA—Leece Neville, Delco-Remy or Autolite.
LDI—Leece Neville, Delco-Remy or Ingersoll-Rand.
LN—Leece Neville Co.
Luc—Lucas.
M—Marine.
MH—Mann and Hummel.
Mic—Michiana Products Corp.
MW—Marine Work Boat.
Mu—Multiple.
N—No or None.
O—Open.
ODS—Own, Delco-Remy and Schwitzer.
Opt—Optional.
P-A—Purolator or AC.
PC—Precombustion chamber.
PI—Pintle.
P-S—Purolator or Stewart-Warner.
Pur—Purolator Products, Inc.
R—Railcars.
RB—Roller bearings.
R-B—Robert Bosch.
RM—Roosa-Master.
s—Shaft horsepower.
Sc—Scintilla Magneto Div.
SC—Swirl chamber.
Sh—Shaft torque; shaft RPM.
Si—Single.
Sim—Simms.
SP—Single and pintle.
Spr—Springfield.
St—Steel.
Stp—Steel, tin plated.
T—Trucks.
TC—Turbulence chamber.
Tr—Tractors.
TR—Tapered roller bearings.
Uni—United Air Cleaner Div.
VI—Vertically In-Head.
V2—Vertically in-head, 2 inlets used.
V4—Vertically in-head, 2 exhaust and 2 intake valves per cylinder.
Van—Vanasil.
Var—Various.
Vor—Vortex.
Vwg—Varies with gear.
W—Wet liners used.
Wau—Waukesha.
W-L—WGB Oil Clarifier or Luberfiner.
WP—Winslow or Purolator.
Win—Winslow filter.
WIP—Wix or Purolator.

For Directory of the Engine Manufacturers listed above, see Table of Contents

SMALL GASOLINE ENGINES ... 1959

MAKE AND MODEL		Designed for Use	Number of Cycles	ENGINE										GOVERNOR		Ignition System Type	FUEL SYSTEM		Fuel Used	Starting Method
				Type	No. of Cylinders	Bore and Stroke (In.)	Total Displacement (Cu. In.)	Compression Ratio (to -1)	Valve Location	Horsepower: Rated at RPM	Horsepower: Continuous at RPM	Torque—Lb. Ft. at RPM	Weight (Lb.)	Used	Type		Type	Make		
								AIR COOLED												
Briggs & Stratton	60100	Ha, AC, Lm	4	Hor	1	2⅜x1½	6.65	4.90	L	2.00-3600	1.70-3600	3.14-3000	21	Y	Pn	Mag	SC	Own	G	Rre
	60300, 60400	General Purpose	4	Hor	1	2⅜x1½	6.65	4.90	L	2.25-3600	1.90-3600	3.42-3200	23	Y	Pm	Mag	FC	Own	G	Rre
	60500	Lm, Til, In	4	Ver	1	2⅜x1½	6.65	4.90	L	2.00-3600	1.70-3600	3.14-3000	18½	Y	Pn	Mag	SC	Own	G	Rre
	60700	Lm, Til, In	4	Ver	1	2⅜x1½	6.65	4.90	L	2.25-3600	1.90-3600	3.42-3200	19¼	Y	Pn	Mag	FC	Own	G	Rre
	61100	General Purpose	4	Hor	1	2⅜x1½	6.65	4.90	L	2.00-3600	1.70-3600	3.14-3000	21	Y	Pn	Mag	SC	Own	G	Rre
	61300, 61400	General Purpose	4	Hor	1	2⅜x1½	6.65	4.90	L	2.25-3600	1.90-3600	3.42-3200	23	Y	Pm	Mag	FC	Own	G	Rre
	61500	Lm, Til, In	4	Ver	1	2⅜x1½	6.65	4.90	L	2.00-3600	1.70-3600	3.14-3000	18½	Y	Pn	Mag	SC	Own	G	Rre
	61700	Lm, Til, In	4	Ver	1	2⅜x1½	6.65	4.90	L	2.25-3600	1.90-3600	3.42-3200	19¼	Y	Pn	Mag	FC	Own	G	Rre
	80100	General Purpose	4	Hor	1	2⅜x1¾	7.75	5.50	L	2.50-3600	2.10-3600	4.03-3000	21½	Y	Pn	Mag	SC	Own	G	Rre
	80300, 80400	General Purpose	4	Hor	1	2⅜x1¾	7.75	6.20	L	3.00-3600	2.55-3600	4.61-3100	25	Y	Pm	Mag	FC	Own	G	Rre
	80500	Lm, Til, In	4	Ver	1	2⅜x1¾	7.75	5.50	L	2.50-3600	2.10-3600	4.03-3000	18¾	Y	Pn	Mag	SC	Own	G	Rre
	80700	Lm, Til, In	4	Ver	1	2⅜x1¾	7.75	6.20	L	3.00-3600	2.55-3600	4.61-3100	19½	Y	Pn	Mag	FC	Own	G	Rre
	81100	General Purpose	4	Hor	1	2⅜x1¾	7.75	5.50	L	2.50-3600	2.10-3600	4.03-3000	21½	Y	Pn	Mag	SC	Own	G	Rre
	81300, 81400	General Purpose	4	Hor	1	2⅜x1¾	7.75	6.20	L	3.00-3600	2.55-3600	4.61-3100	25	Y	Pm	Mag	FC	Own	G	Rre
	81500	Lm, Til, In	4	Ver	1	2⅜x1¾	7.75	5.50	L	2.50-3600	2.10-3600	4.03-3000	18¾	Y	Pn	Mag	SC	Own	G	Rre
	81700	Lm, Til, In	4	Ver	1	2⅜x1¾	7.75	6.20	L	3.00-3600	2.55-3600	4.61-3100	19½	Y	Pn	Mag	FC	Own	G	Rre
	9	General Purpose	4	Hor	1	2¼x2¼	8.95	5.40	L	3.35-3600	2.83-3600	5.29-2700	61	Y	Me	Mag	FC	Own	G	Hbp
	14	General Purpose	4	Hor	1	2⅝x2⅝	14.21	5.40	L	5.25-3600	4.20-3600	8.75-2700	76	Y	Me	Mag	FC	Own	G	Hbp
	141300	General Purpose	4	Hor	1	2¾x2⅜	14.10	5.60	L	4.50-3600	3.80-3600	8.06-2300	43	Y	Pm	Mag	FC	Own	G	Rc
	141700	General Purpose	4	Ver	1	2¾x2⅜	14.10	5.60	L	4.50-3600	3.80-3600	8.06-2300	38½	Y	Pn	Mag	FC	Own	G	Rc
	143300	General Purpose	4	Hor	1	2¾x2⅜	14.10	5.60	L	5.75-3600	4.90-3600	8.88-3000	44	Y	Pm	Mag	FC	Own	G	Rc
	143700	General Purpose	4	Ver	1	2¾x2⅜	14.10	5.60	L	5.75-3600	4.90-3600	8.88-3000	40½	Y	Pn	Mag	FC	Own	G	Rc
	19	General Purpose	4	Hor	1	3x2⅝	18.56	5.60	L	7.00-3600	5.95-3600	15.50-2200	78	Y	Me	Mag	FC	Own	G	Hbp
	23A	General Purpose	4	Hor	1	3x3¼	22.97	5.90	L	9.00-3600	7.60-3600	15.79-2300	98	Y	Me	Mag	FC	Own	G	Hbp
Clinton	VS-400, CVS-400	General Purpose	2	Ver	1	2⅛x1⅝	5.76	.....		2.50-3800	2.00-3800	3.60-2900	14	Y	Pn	Mag	FC	Own	G	Rr
	VS-2100	General Purpose	4	Ver	1	2⅜x1⅝	7.20	.....	L	2.25-3600	1.80-3600	3.57-2900	18¼	Y	Pn	Mag	FC	Own	G	Rr
	VS-4100	General Purpose	....	Ver	1	2⅜x1⅞	8.30	.....	L	2.75-3600	2.20-3600	4.40-3000	18½	Y	Pn	Mag	FC		G	R
	VS-100	General Purpose	....	Ver	1	2⅜x1⅝	7.20	.....	L	2.50-3600	2.00-3600	3.80-3000	20	Y	Pn	Mag	FC		G	R
	VS-3100, AVS-3100	General Purpose	4	Ver	1	2⅜x1⅞	8.30	.....	L	3.00-3600	2.40-3600	5.00-2600	20	Y	Pn	Mag	FC	Own	G	Rr
	V-100	General Purpose	....	Ver	1	2⅜x1⅝	7.20	.....	L	2.75-3600	2.20-3600	4.20-3000	30¼	Y	Pn	Mag	FC	.....	G	R
	V-3100, AV-3100	General Purpose	....	Ver	1	2⅜x1⅞	8.30	.....	L	3.25-3600	2.60-3600	5.30-2800	30½	Y	Pn	Mag	FC	.....	G	R
	V-1100	General Purpose	....	Ver	1	2⅜x2⅛	9.50	.....	L	3.75-3600	3.00-3600	....	31	Y	Pn	Mag	FC	.....	G	R
	V-1200	General Purpose	....	Ver	1	2 7/16x2 3/16	10.20	.....	L	4.50-3600	3.60-3600	3.25-2600	40	Y	Pn	Mag	FC	.....	G	R
	A-400, A-490	General Purpose	....	Hor	1	2⅛x1⅝	5.76	.....		2.50-3800	2.00-3800	3.50-3100	20	Y	Pn	Mag	FC	.....	G	R
	A-460	General Purpose	....	Hor	1	2⅛x1⅝	5.76	.....		2.50-633	2.00-633	21.60-515	26	Y	Pn	Mag	FC	.....	G	R
	A-2100, A-2190	General Purpose	....	Hor	1	2⅜x1⅝	7.20	.....	L	2.25-3600	1.80-3600	3.65-2800	21½	Y	Pn	Mag	FC	.....	G	R
	A-2160	General Purpose	....	Hor	1	2⅜x1⅝	7.20	.....	L	2.25-600	2.00-600	22.00-450	27½	Y	Pn	Mag	FC	.....	G	R
	4100, 4190	General Purpose	....	Hor	1	2⅜x1⅞	8.30	.....	L	2.75-3600	2.20-3600	4.40-3000	21½	Y	Pn	Mag	FC	.....	G	R
	4160	General Purpose	....	Hor	1	2⅜x1⅞	8.30	.....	L	2.75-600	2.20-600	26.40-500	27½	Y	Pn	Mag	FC	.....	G	R
	100, 190	General Purpose	4	Hor	1	2⅜x1⅝	7.20	.....	L	2.50-3600	2.00-3600	3.80-3000	23	Y	Pn	Mag	FC	Own	G	Rr
	160	General Purpose	4	Hor	1	2⅜x1⅝	7.20	.....	L	2.50-600	2.00-600	22.80-500	29	Y	Pn	Mag	FC	Own	G	Rr
	3100, 3190	General Purpose	....	Hor	1	2⅜x1⅞	8.30	.....	L	3.00-3600	2.40-3600	5.00-2700	23	Y	Pn	Mag	FC		G	R
	3160	General Purpose	....	Hor	1	2⅜x1⅞	8.30	.....	L	3.00-600	2.40-600	29.50-450	29	Y	Pn	Mag	FC		G	R
	D-700, D-790	General Purpose	4	Hor	1	2⅛x1⅞	6.65	.....	L	2.25-3600	2.00-3600	3.65-2800	41	Y	Fb	Mag	FC	Own	G	Rr
	D-760	General Purpose	4	Hor	1	2⅛x1⅞	6.65	.....	L	2.25-600	2.00-600	22.00-467	47	Y	Fb	Mag	FC	Own	G	Rr
	900, 990	General Purpose	4	Hor	1	2⅜x1⅞	8.30	.....	L	3.00-3600	2.40-3600	4.95-2700	41	Y	Fb	Mag	FC	Own	G	Rr
	960	General Purpose	4	Hor	1	2⅜x1⅞	8.30	.....	L	3.00-600	2.40-600	29.50-450	47	Y	Fb	Mag	FC	Own	G	Rr
	B-1290, B-1260	General Purpose	4	Hor	1	2 7/16x2 3/16	10.20	.....	L	4.00-3600	3.20-3600	6.60-2500	45	Y	Fb	Mag	FC	Own	G	Rr
	A-1600, A-1690	General Purpose	4	Hor	1	2 11/16x2⅞	16.30	.....	L	6.30-3600	5.04-3600	10.50-2100	87	Y	Fb	Mag	FC	Own	G	ER
	A-1660	General Purpose	4	Hor	1	2 11/16x2⅞	16.30	.....	L	6.30-600	5.04-600	64.50-365	100	Y	Fb	Mag	FC	Own	G	ER
	B-2500, B-2590	General Purpose	4	Hor	1	3⅛x3¼	25.00	.....	L	9.60-3600	7.68-3600	16.50-2500	103	Y	Fb	Mag	FC	Own	G	ER
	B-2560	General Purpose	4	Hor	1	3⅛x3¼	25.00	.....	L	9.60-600	7.68-3600	96.00-415	116	Y	Fb	Mag	FC	Own	G	ER
Continental	AU7, AU7B	General Purpose	4	(b)	1	2⅛x2	7.10	6.10	L	2.00-3600	1.70-3600	3.02-3000	36	Y	MA	Mag	Car	CTZ	G	BR
	AU7R	General Purpose	4	(b)	1	2⅛x2	7.10	6.10	L	2.00-600	1.70-600	18.10-500	41	Y	MA	Mag	Car	CTZ	G	BR
	AD7, AW7	Lawn Mowers	4	Ver	1	2⅛x2	7.10	6.10	L	2.00-3600	1.70-3600	3.02-3000	41	Y	Av	Mag	Car	CTZ	G	BR
	AU8, AU8B	General Purpose	4	(b)	1	2¼x2	7.95	6.65	L	2.85-3600	2.42-3600	4.25-2600	36	Y	MA	Mag	Car	CTZ	G	BR
	AU8R	General Purpose	4	(b)	1	2¼x2	7.95	6.65	L	2.85-600	2.42-600	25.50-433	36	Y	MA	Mag	Car	CTZ	G	BR
	AD8, AW8	Lawn Mowers	4	Ver	1	2¼x2	7.95	6.65	L	2.85-3600	2.42-3600	4.25-2600	41	Y	Av	Mag	Car	CTZ	G	BR
	AU85	General Purpose	4	(b)	1	2 5/16x2	8.40	6.10	L	3.00-3600	2.55-3600	4.50-2600	36	Y	MA	Mag	Car	CTZ	G	BR
	AU85R	General Purpose	4	(b)	1	2 5/16x2	8.40	6.10	L	3.00-600	2.55-600	27.00-433	41	Y	MA	Mag	Car	CTZ	G	BR
	AD85, AW85	Lawn Mowers	4	Ver	1	2 5/16x2	8.40	6.10	L	3.00-3600	2.55-3600	4.50-2600	41	Y	Av	Mag	Car	CTZ	G	BR
	AU10	General Purpose	4	(b)	1	2⅝x2	10.80	5.75	L	4.00-3600	3.40-3600	4.90-3000	38	Y	MA	Mag	Car	Till	G	BR
	AU10R	General Purpose	4	(b)	1	2⅝x2	10.80	5.75	L	4.00-600	3.40-600	29.40-500	43	Y	MA	Mag	Car	Till	G	BR
Cushman	Husky-M6	General Purpose	4	Ver	1	2⅝x2¼	12.30	4.40	L	4.10-3800	3.50-3200	5.80-2600	80	Y	Fb	Mag	Car	Till	G	Pe
	Husky-M7	General Purpose	4	Ver	1	2⅞x2¼	14.90	5.10	L	6.10-3800	5.40-3200	9.00-2600	82	Y	Fb	Mag	Car	Till	G	Pe
	Husky-M8	General Purpose	4	Ver	1	2⅞x2¾	17.80	5.90	L	7.30-3800	6.70-3200	11.50-2600	84	Y	Fb	Mag	Car	Till	G	Pe
	Husky-M9	General Purpose	4	Ver	1	3x2¾	19.40	6.40	L	8.00-3800	7.50-3200	13.20-2600	86	Y	Fb	Mag	Car	Till	G	Pe
Gladden	40	General Purpose	4	Ver	1	2½x3	14.70	4.50	L	4.20-3200	4.20-3200	....	76	Y	Ce	Mag	Car	MS	G	BP
	50	General Purpose	4	Ver	1	2½x3	14.70	5.70	L	5.00-3200	5.00-3200	....	78	Y	Ce	Mag	Car	MS	G	BP
	75	General Purpose	4	Ver	1	2⅞x3	19.50	5.70	L	7.00-3200	7.00-3200	....	83	Y	Ce	Mag	Car	MS	G	BP
Gravely	L	Garden Tractor	4	Ver	1	3¼x3½	29.50	5.00	L	5.00-2500	4.00-2500	6.60-2500	75	Opt	....	Mag	Car	Zen	G	BP
Homelite	15	Generator Sets	2	Ver	1	1⅜x1¼	1.85	.....	....	0.43-3600	....	....		Y	Ce	Mag	Car	Zen	G	R
	4-20	Chain Saw	2	Ver	1	2x1⅜	4.32	.....	....	....	....	....	20¼	Y	Pn	Mag	Car	Brown	G	Rc
	7-21, 7-19	Chain Saw	2	Ver	1	2 1/16x1½	5.01	.....	....	....	....	....	**	Y	Pn	Mag	Car	TB	G	Rc
	20	GS, Pu	2	Ver	1	2⅜x1½	6.63	.....	....	2.50-3600	....	....	(g)	Y	Ce	Mag	Car	Till	G	R
	5-30N	Chain Saw	2	Ver	1	2 7/16x1½	6.97	.....	....	....	....	....	28 3/16	Y	Ce	Mag	Car	TB	G	Rc
	35	Generator Sets	2	Ver	1	2 7/16x1½	6.97	.....	....	3.00-3600	....	....	90	Y	Ce	Mag	Car	Till	G	R
	8-29	Chain Saw	2	Ver	1	2½x1⅝	8.00	.....	....	....	....	....	28⅞	Y	Ce	Mag	Car	TB	G	Rc
	23	GS, Pu	2	Ver	1	2¼x2⅛	8.45	.....	....	3.50-3600	....	....	***	Y	Ce	Mag	Car	Own	G	R
	36	Pumps	2	Ver	1	2¼x2⅛	8.45	.....	....	3.00-2800	....	....	87	Y	Ce	Mag	Car	Till	G	R
	24	GS, Pu	2	Ver	1	2⅝x2⅛	11.50	.....	....	5.50-3600	....	....	(h)	Y	Ce	Mag	Car	Own	G	R
	37	Pumps	2	Ver	1	2⅝x2⅛	11.50	.....	....	4.50-2800	....	....		Y	Ce	Mag	Car	Till	G	R
	8	GS, Pu	2	Ver	1	2¾x2⅛	12.62	.....	....	7.00-3900	....	....		Y	Ce	Mag	Car	Till	G	R
	ZIP	Chain Saw	2	Ver	1	2x1½	4.71	.....	Re	....	....	....	18 7/16	N	....	Mag	Car	TB	G	Hr
Jacobsen	J-100	Lawn Mowers	2	Hor	1	2x1½	4.70	5.50	....	2.00-3600	1.60-3600	2.90-3600	22	Y	Av	Mag	Car	Till	GO	ER
	J-125	Lawn Mowers	2	Hor	1	2x1½	4.70	5.50	....	2.25-3600	1.90-3600	3.28-3600	22	Y	Av	Mag	Car	Till	GO	ER
	J-175	Lawn Mowers	2	Hor	1	2⅛x1¾	6.20	6.00	....	3.00-3600	2.55-3600	4.38-3600	22	Y	Av	Mag	Car	Till	GO	ER
	J-175V	Lawn Mowers	2	Hor	1	2⅛x1¾	6.20	6.00	....	3.00-3600	2.55-3600	4.38-3600	20	Y	Av	Mag	Car	Till	GO	ER
	J-225V	Lawn Mowers	2	Hor	1	2¼x2	7.95	5.35	....	4.00-3600	3.40-3600	5.85-3600	36	Y	Av	Mag	Car	Till	GO	ER

For Directory of the Engine Manufacturers listed above, see Table of Contents

1959 . . . SMALL GASOLINE ENGINES

MAKE AND MODEL	Designed for Use	Number of Cycles	ENGINE: Type	No. of Cylinders	Bore and Stroke (In.)	Total Displacement (Cu. In.)	Compression Ratio (to -1)	Valve Location	Horsepower: Rated at RPM	Horsepower: Continuous at RPM	Torque—Lb. Ft. at RPM	Weight (Lb.)	GOVERNOR: Used	GOVERNOR: Type	Ignition System Type	FUEL SYSTEM: Type	FUEL SYSTEM: Make	Fuel Used	Starting Method
						AIR COOLED—continued													
JLO-Hercules L101	General Purpose	2		1	1.97x1.97	6.00	6.80		4.30-4500		5.14-3500	19.4	Y		Mag	Car	Bing	G	Rb
L151	General Purpose	2		1	2.32x2.13	9.00	6.80		6.00-4500		7.96-3500	25.4	Y		Mag	Car	Bing	G	Rb
L250	General Purpose	2		1	2.72x2.60	15.00	6.60		7.80-4000		12.00-2500	57.33	Y		Mag	Car		G	Pre
L375*	General Purpose	2		1	3.15x2.91	22.70	6.90		13.50-3600		22.00-2500	70.56	Y		Mag	Car		G	Pro
Kohler K91	General Purpose	4	Hor	1	2 3/8x2	8.86	6.80	L	4.00-4000	3.06-3600	5.20-3600	40	Y	Fb	Mag	Car	Cart	G, K	Bpe
K161	General Purpose	4	Hor	1	2 7/8x2 1/2	16.22	6.20	L	7.00-3600	5.50-3600	10.20-3600	67	Y	Fb	BM	Car	Cart	G, K	Bpe
K241	General Purpose	4	Hor	1	3 1/4x2 7/8	23.80	6.50	L	9.60-3600	6.75-3000	16.70-2200	107	Y	Fb	Mag	Car	Cart	G	Bpe
K331	General Purpose	4	Hor	1	3 5/8x3 1/4	33.60	6.20	L	12.50-3200	10.50-3200	20.40-3200	175	Y	Fb	BM	Car	Cart	G	Bpe
K660	General Purpose	4	Op	2	3 5/8x3 1/4	67.20	6.20	L	24.00-3200	20.40-3200	39.20-3200	230	Y	Fb	Mag	Car	CZ	G	HE
Lauson H20, HR20	GS, AC, Ha, Af	4	Hor	1	2 1/8x1 3/4	6.21	6.00	L	2.00-3600	1.60-3600	2.90-3600	24	Y	Pn	Mag	FC	Wal	G	Rc
H25, HB25, HR25	GS, AC, Ha, Af	4	Hor	1	2 5/16x1 3/4	7.35	6.00	L	2.50-3600	2.00-3600		24	Y	Pn	Mag	FC	Wal	G	Rc
H30, HB30, HR30	GS, AC, Ha, Af, Pu	4	Hor	1	2 5/16x1 13/16	7.61	6.20	L	3.00-3600	2.40-3600	4.40-3600	24	Y	Pn	Mag	FC	Wal	G	Rc
H35, HB35, HR35	GS, AC, Ha, Af, Pu	4	Hor	1	2 1/2x2 1/4	11.04	6.60	L	3.50-3600	2.80-3600	5.50-3600	40 1/4	Y	Pn	Mag	FC	Wal	G	Rc
H45, HB45, HR45	GS, AC, Ha, Af, Pu	4	Hor	1	2 1/2x2 1/4	11.04		L	4.50-3600	3.60-3600	6.50-3600	40 1/4	Y	Pn	Mag	FC	Wal	G	Rc
H55, HB55, HR55	GS, AC, Ha, Af, Pu	4	Hor	1	2 5/8x2 1/4	13.53		L	5.50-3600	4.40-3600	8.10-3600	40 1/4	Y	Pn	Mag	FC	Wal	G	Rc
V22	Af, Lm	4	Ver	1	2 1/8x1 3/4	6.21	5.80	L	2.20-3600	1.76-3600	3.50-3600	21 1/4	Y	Av	Mag	FC	Wal	G	Rc
V25	Af, Lm	4	Ver	1	2 5/16x1 3/4	7.35		L	2.50-3600	2.00-3600		23 1/2	Y	Pn	Mag	FC	Wal	G	Rc
V27		4	Ver	1	2 5/16x1 3/4	7.35	6.00	L	2.75-3600	2.16-3600	4.10-3600	21 1/4	Y	Pn	Mag	FC	Wal	G	Rc
V30	Af, Lm	4	Ver	1	2 5/16x1 13/16	7.61	6.20	L	3.00-3600	2.40-3600	4.40-3600	21 1/4	Y	Pn	Mag	FC	Wal	G	Rc
V35, VC35, VX35	Ha, Lm	4	Ver	1	2 1/2x2 1/4	11.04	6.60	L	3.50-3600	2.80-3600	5.50-3600	36 1/2	Y	Pn	Mag	FC	Wal	G	Rc
V40, VC40, VX40	Af, Lm	4	Ver	1	2 1/2x2 1/4	11.04	6.60	L	4.00-3600	3.20-3600	5.80-3600	36 1/2	Y	Pn	Mag	FC	Wal	G	Rc
V45, VC45, VX45		4	Ver	1	2 1/2x2 1/4	11.04		L	4.50-3600	3.60-3600	6.50-3600	36 1/2	Y	Pn	Mag	FC		G	Rc
V55, VC55, VX55		4	Ver	1	2 5/8x2 1/4	13.53		L	5.50-3600	4.40-3600	8.10-3600	36 1/2	Y	Pn	Mag	FC		G	Rc
McCulloch MAC35, MAC35A	Chain Saws	2	Ver	1	1 3/4x1 3/8	3.30	7.00						N		Mag	Car	Own	G	BP
39	Chain Saws	2	Ver	1	1 3/4x1 3/8	3.30	7.20					16 1/2	N		Mag	Car	Own	G	BP
D-44	Chain Saws	2	Hor	1	2x1 3/8	4.30	7.60					21	Y	Av	Mag	Car	Own	G	BP
49	Chain Saws	2	Ver	1	2x1 1/2	4.70	7.00	Ro				29	Y	RV	Mag	Car	Own	G	BP
MAC-D30	Chain Saws	2	Hor	1	2 1/8x1 3/8	4.90	7.20					16 1/2	N		Mag	Car	Own	G	BP
D-36	Chain Saws	2	Hor	1	2 1/8x1 3/8	4.90	7.20					16 1/2			Mag	Car	Own	G	BP
Super 55	Chain Saws	2	Hor	1	2 1/8x1 3/8	4.90	8.00					24	Y	Av	Mag	Car	Own	G	BP
Super 44	Chain Saws	2	Hor	1	2 1/8x1 3/8	4.90	8.00					21	Y	Av	Mag	Car	Own	G	BP
Super 44A	Chain Saws	2	Hor	1	2 1/8x1 1/2	5.32	8.00						Y	Av	Mag	Car	Own	G	BP
Super 55A	Chain Saws	2	Hor	1	2 1/8x1 1/2	5.32	8.00						Y	Av	Mag	Car	Own	G	BP
77	Chain Saws	2	Ver	1	2 1/2x1 1/2	7.35	6.80	Ro				32	Y	Ce	Mag	Car	Own	G	BP
99	Chain Saws	2	Hor	1	2 1/2x2	9.90	6.50					51	Y	RV	Mag	Car	Own	G	BP
Mustang Standard	Motorcycles	4	Ver	1	2 7/8x3	19.50	6.00	L	9.50-5000	9.50-5000			N		Mag	Car	Am	G	Pe
Special	Motorcycles	4	Ver	1	2 7/8x3	19.50	7.00	L	10.50-5000	10.50-5000			N		Mag	Car	Am	G	Pe
Onan AK	Generator Sets	4	Ver	1	2 1/2x2 1/2	12.20	5.50	L	3.76-3600	2.82-3600	5.80-1800	74	Y	(d)	Mag	Car	Cart	G	HE
AJ	GS, Rf, Af	4	Ver	1	2 3/4x2 1/2	14.90	6.25	L	5.50-3600	3.86-3600	8.00-2100	150	Y	(d)	BM	Car	Cart	G	HE
LK	GS, Rf	4	Ver	1	3 1/4x3	25.00	5.50	L	5.10-1800	4.34-1800	14.90-1800	114	Y	(d)	BM	Car	Cart	G	HE
ACK	Generator Sets	4	Op	2	3x2 3/4	38.80	6.25	L	13.80-3600	10.00-3600	20.00-3600	125	Y	Me	Mag	Car	Till	G	Hc
VB	Generator Sets	4	Vee	2	3 1/4x2 3/4	45.70	6.25	I	19.25-3600	16.20-3600	29.80-2800	140	Y	Me	Mag	Car	MS	G	Ele
CCK	General Purpose	4	Op	2	3 1/4x3	50.00	5.50	L	13.60-3000	12.90-2700	27.80-1800	148	Y	(d)	BM	Car	MS	G	HE
CW	Generator Sets	4	Op	2	4x3 1/2	88.00	5.50	L	20.00-1800	16.50-1800	58.30-1800	420	Y	Fb	Mag	Car	Zen	G	HE
Power Products AH47-1072	General Purpose	2	Hor	1	2x1 1/2	4.70	5.50	N	2.20-3800			16	Y	Fb	Mag	FC	Till	G	Rc
AH47-1118	GP, Cs	2	Hor	1	2x1 1/2	4.70	5.50		3.25-4800	3.25-4800	3.40-4800	12 1/4	N		Mag	Car	Till	GO	Rc
AH81-40001	General Purpose	2	Hor	1	2 1/2x1 5/8	7.98	5.50	N	5.50-5000			13 3/4	Y	Fb	Mag	Car	Till	GO	Rc
AV47	GP, Cs	2	Ver	1	2x1 1/2	4.70	5.50		2.20-3800				Y	Fb	Mag	Car	Till	GO	Rc
West Bend 390	General Purpose	2	(k)	1	1 3/4x1 5/8	3.90		Re	1.50-3600	1.50-3600	2.30-3600	14 1/2	Y	Av	Mag	Car	Till	G	RA
510	General Purpose	2	(k)	1	2x1 5/8	5.10		Re	3.00-4500	3.00-4500	3.60-4500	13 1/2	N		Mag	Car	Till	G	Rc
645	General Purpose	2	(k)	1	2 1/4x1 5/8	6.45		Re	4.00-4500	4.00-4500	4.80-4500	13 1/2	N		Mag	Car	Till	G	Rc
700	General Purpose	2	(k)	1	2 1/4x1 3/4	7.00		Re	5.00-5500	5.00-5500	5.17-5500	13 1/2	N		Mag	Car	Till	G	Rc
Wisconsin ACN	General Purpose	4	Ver	1	2 5/8x2 3/4	14.88	5.88	L	6.00-3600	4.80-3600	9.50-2800	76	Y	Fb	Mag	Car	SZ	G	BP
BKN	General Purpose	4	Ver	1	2 7/8x2 3/4	17.80	5.88	L	7.00-3600	5.60-3600	12.00-2600	76	Y	Fb	Mag	Car	SZ	G	BP
AENL	General Purpose	4	Ver	1	3x3 1/4	23.00	6.21	L	9.20-3600	7.40-3600	16.50-2300	110	Y	Fb	Mag	Car	Zen	G	BP
AGN	General Purpose	4	Ver	1	3 1/2x4	38.50	6.12	L	12.50-3200	10.00-3200	27.00-1900	180	Y	Fb	Mag	Car	Zen	G	Hc
TH	General Purpose	4	Ver	2	3 1/4x3 1/4	53.90	6.25	L	16.40-2600	13.10-2600	34.00-2000	220	Y	Fb	Mag	Car	Zen	G	Hc
THD	General Purpose	4	Ver	2	3 1/4x3 1/4	53.90	6.25	L	18.00-3200	14.40-3200	34.00-2000	220	Y	Fb	Mag	Car	Zen	G	Hc
						WATER COOLED													
Kohler L160	Generator Sets	4	Hor	1	2 7/8x2 1/2	16.22	6.00	L	6.60-3600	5.50-3600	9.70-3600	100	Y	Fb	Mag	Car	Cart	G	BP

ABBREVIATIONS

*—Also available in 2 and 3 cylinders.
**—21 1/8 lbs. for 6.22 model; 19 3/16 lbs. for EZ-6 model.
***—Generator set use, 110 lbs.; pump use, 85 lbs.
(b)—Inclined 20° up from horizontal.
(d)—Flyweights on camshaft.
(g)—Generator set use, 68 lbs.; pump use, 45 lbs.
(h)—Generator set use, 135 lbs.; pump use, 95 lbs.
(k)—Available with vertical or horizontal shaft.
Af—Auxiliary farm implement equipment.
AC—Air compressors.
Am—Amal.
Av—Air vane.
BM—Battery and magneto.
BP—Belt or pulley.
Bpe—Belt, pulley or electric.
BR—Belt, pulley or recoil.
Car—Carburetor.
Cart—Carter Carburetor Corp.
Ce—Centrifugal.
Cs—Chain saws.
CTZ—Carter, Tillotson or Zenith.
CZ—Carter or Zenith.
Ele—Electric.
ER—Electric or rope.
Fb—Flyball.
FC—Float feed carburetor.
G—Gasoline.
GO—Gasoline and oil mix.
GP—General purpose.
GS—Generator sets.
Ha—Home appliances.
Hbp—Hand crank, belt or pulley.
Hc—Hand crank.
HE—Hand crank or electric.
Hor—Horizontal.
Hr—Hand crank or recoil.
I—Valves in head.
In—Industrial.
L—"L" head, valves at side.
Lm—Lawn mowers.
MA—Mechanical or air vane.
Mag—Magneto.
Me—Mechanical.
Mo—Mobile equipment.
MS—Marvel-Schebler Carburetor Div.
N—No or none.
Op—Opposed.
Opt—Optional.
Pe—Pedal.
Pre—Pulley, rewinding, or electric.
Pm—Pneumatic and mechanical.
Pn—Pneumatic.
Pu—Pumps.
R—Rope.
RA—Rope or automatic rewinding rope.
Rc—Recoil.
Re—Reed valves.
Rf—Refrigeration equipment.
Ro—Rotary.
Rr—Recoil or rope.
Rre—Recoil, rope or electric.
RV—Rotary valve.
SC—Suction feed.
SZ—Marvel-Schebler or Zenith.
TB—Tillotson and Brown.
Til—Tillers.
Till—Tillotson.
Vee—"V" type engine.
Ver—Vertical.
Wal—Walbro.
Y—Yes.
Zen—Zenith Carburetor Div.

For Directory of the Engine Manufacturers listed above, see Table of Contents

1959 . . . OUTBOARD MOTORS

MAKE AND MODEL	Power Head	Number of Cylinders	Cylinder Material	Bore and Stroke (In.)	Piston Displacement (Cu. In.)	Engine Type	Brake Hp. at R.P.M. O.B.C. Rating	Engine Weight (Lb.) Fully Equipped	Piston Rings—Number and Width	Propeller: Diameter (In.)	Propeller: Pitch	Propeller: Right or Left Hand Rotation	Propeller: Number of Blades	Starting Device	Fuel Tank Capacity (Pts.)	Gear: Ratio	Gear: Tooth Pitch	Gear: Material (S.A.E. No.)	Gearcase Bearing	Magneto Make	Carburetor: Make	Carburetor: Size (In.)	Carburetor: Starting Mixture Obtained by—	Spark Plug—Make and Model	Bearings: Main	Bearings: Connecting Rod	Cooling System	Reverse	Lubrication—Pints Oil to 1 Gal. Gasoline
Buccaneer 3D15B	Re-3 Port	1	ACS	2 1/8x1 1/2	5.32	S	3.0-4000	38	2-3/32	6 3/8	6 7/8	L	2	RR	4.00	13-22	13.56	8620	Pl	Own	Own	3/4	Pr	Ch-J6J	Pl	Pl	RP	No	1/3
5D16B	Re-3 Port	2	ACS	1 15/16x1 1/2	8.84	AF	5.0-4000	51[2]	3-3/32	8	7 1/4	R	2	RR	32.00	15-26	12.40	8620	P	Own	Own	1/2	C	Ch-J6J	Pl	Pl	Cen	Yes	1/3
12D18B	Re-3 Port	2	ACS	2 1/4x2 1/4	17.89	AF	12.0-4000	77[2]	3-3/32	9	11	R	3	RR	48.00	15-26	11.11		Pl	Own	Own	21/32	C	Ch-J6J	Pl	Pl	Cen	Yes	1/3
22D16B	Re-3 Port	2	ACS	2 7/8x2 3/4	35.70	AF	25.0-4500	119[2]	3-3/32	10 3/8	12 1/2	R	3	RR	48.00	12-21	7.50	8620 H	A	Own	Own	1 3/64	C	Ch-J6J	A	A	Cen	Yes	1/3
22DE16B	Re-3 Port	2	ACS	2 7/8x2 3/4	35.70	AF	25.0-4500	130[2]	3-3/32	10 3/8	12 1/2	R	3	ER	48.00	12-21	7.50	8620 H	A	Own	Own	1 5/64	C	Ch-J6J	A	A	Cen	Yes	1/3
35D11B	Re-3 Port	2	ACS	3 1/16x2 3/4	40.50	AF	35.0-4500	178	3-3/32	10 3/8	13 1/4	R	3	Ro	48.00	12-21	7.50	8620 H	A	Own	Own	1 1/4	C	Ch-J6J	A	A	Cen		1/3
35D12B	Re-3 Port	2	ACS	3 1/16x2 3/4	40.50	AF	35.0-4500	178	3-3/32	10 3/8	13 1/4	R	3	Ro	48.00	12-21	7.50	8620 H	A	Own	Own	1 1/4	C	Ch-J6J	A	A	Cen		1/3
35DE11B	Re-3 Port	2	ACS	3 1/16x2 3/4	40.50	AF	35.0-4500	134[2]	3-3/32	10 3/8	13 1/4	R	3	ER	48.00	12-21	7.50	8620 H	A	Own	Own	1 1/4	C	Ch-J6J	A	A	Cen	Yes	1/3
35DE12B	Re-3 Port	2	ACS	3 1/16x2 3/4	40.50	AF	35.0-4500	134[2]	3-3/32	10 3/8	13 1/4	R	3	ER	48.00	12-21	7.50	8620 H	A	Own	Own	1 1/4	C	Ch-J6J	A	A	Cen	Yes	1/3
Elgin 571.58241	Re-2 Port	1	ACS	1 3/4x1 9/16	3.76	S	2.0-4000	28	3-1/16	6 1/2	4	L	2	RR	5.00	14-21	12.00	4140	Pl	Wico	Til	1/2	C	Ch-H10J	Pl	Pl	Air	No	1/2
571.59541	Re-2 Port	2	ACS	2x1 11/16	10.60	AF	5.5-4000	56	3-1/16	7 1/2	7	R	3	RR	34.00	14-23	12.00	4140	Pl	Wico	Til	1/2	C	Ch-H10J	Pl	A	VP	Yes	1/2
571.58971	Re-2 Port	2	ACS	2 1/8x1 11/16	11.97	AF	7.5-4000	46	3-1/16	7 1/2	7 1/2	L	2	RR	20.00	14-21	12.00	4140	Pl	Wico	Til	9/16	C	Ch-H8J	PA	A	VP	No	1/2
571.59741	Re-2 Port	2	ACS	2 1/8x1 11/16	11.97	AF	7.5-4000	57	3-1/16	8	8	R	2	RR	34.00	14-23	12.00	4140	Pl	Wico	Til	9/16	C	Ch-H8J	PA	A	VP	Yes	1/2
571.58801	Re-2 Port	2	ACS	2 3/8x2	17.72	AF	12.0-4000	61	3-1/16	8 1/2	8	R	3	RR	34.00	14-23	10.00	4140	PA	Wico	Til	3/4	C	Ch-H8J	A	A	VP	Yes	1/2
571.58981[11]	Re-2 Port	2	ACS	2 3/8x2	17.72	AF	12.0-4000	61	3-1/16	8 1/2	8	R	3	RR	48.00	14-23	10.00	4140	PA	Wico	Til	3/4	C	Ch-H8J	A	A	VP	Yes	1/2
571.59441[11]	Re-2 Port	2	ACS	3 1/8x2.706	41.49	AF	35.0-4500	118	3-3/32	10 1/2	12	R	3	RR	48.00	13-21	8.00	8620	A	FM	Til	1 3/32	C	Ch-H8J	A	PA	VP	Yes	1/2
571.59821[11]	Re-2 Port	2	ACS	3 1/8x2.706	41.49	AF	35.0-4500	130	3-3/32	10 1/2	12	R	3	Ele	48.00	13-21	8.00	8620	A	Wico	Til	1 3/32	C	Ch-H8J	A	PA	VP	Yes	1/2
571.59901[11]	Re-2 Port	2	ACS	3 1/8x2.706	41.49	AF	35.0-4500	138	3-3/32	10 1/2	12	R	3	Ele	48.00	13-21	8.00	8620	A	Wico	Til	1 3/32	C	Ch-H8J	A	PA	VP	Yes	1/2
Evinrude Lightwin 3030	Re-2 Port	2	ACS	1 9/16x1 3/8	5.28	AF	3.0-4000	33	2-3/32	6 1/8	6 1/4	L	2	RR	5.60	17-28	15.68	8620	Pl	Own	Own	23/64	C	Ch-J6JM[1]	Pl	Pl	Cen	Yes	1/3
Ducktwin 3032	Re-2 Port	2	ACS	1 9/16x1 3/8	5.28	AF	3.0-4000	33	2-3/32	6 1/8	6 1/4	L	2	RR	5.60	17-28	15.68	8620	Pl	Own	Own	23/64	C	Ch-J6JM[1]	Pl	Pl	Cen	Yes	1/3
Fisherman 5518	Re-2 Port	2	ACS	1 15/16x1 1/2	8.84	AF	5.5-4000	56	3-3/32	8	7 1/4	R	2	RR	34.00	15-26	12.40	8620	Pl	Own	Own	9/16	C	Ch-J6JM[1]	Pl	Pl	The	Yes	1/3
Sportwin 10018	Re-2 Port	2	ACS	2 3/8x1 7/8	16.60	AF	10.0-4000	67	3-3/32	8 1/4	8 1/2	R	3	RR	48.00	15-26	12.40	8620	Pl	Own	Own	11/16	C	Ch-J6JM[1]	PA	A	The	Yes	1/3
Fastwin 15028	Re-2 Port	2	ACS	2 1/2x2 1/4	22.00	AF	18.0-4000	79	3-3/32	9 1/4	11	R	3	RR	48.00	15-26	11.11	8620	Pl	Own	Own	7/8	C	Ch-J6JM[1]	A	A	The	Yes	1/3
Bigtwin 35012	Re-2 Port	2	ACS	3 1/16x2 3/4	40.50	AF	35.0-4500	125	3-3/32	10 3/8	13 1/4	R	3	RR	48.00	12-21	7.50	8620	A	Own	Own	1 1/4	C	Ch-J6JM[1]	A	A	The	Yes	1/3
Lark 35516	Re-2 Port	2	ACS	3 1/16x2 3/4	40.50	AF	35.0-4500	138	3-3/32	10 3/8	13 1/4	R	3	Ele	48.00	12-21	7.50	8620	A	Own	Own	1 1/4	C	Ch-J6JM[1]	A	A	The	Yes	1/3
Four-Fifty 50016	Re-2 Port	4	ACS	3x2 1/2	70.70	VT	50.0-4500	209	3-3/32	12	14	R	3	RR	48.00	17-29	8.00	8620	A	Own	Own	1 3/16	C	Ch-J6JM[1]	A	A	The	Yes	1/3
Starflite 50518	Re-2 Port	4	ACS	3x2 1/2	70.70	VT	50.0-4500	221	3-3/32	12	14	R	3	Ele	48.00	17-29	8.00	8620	A	Own	Own	1 3/16	C	Ch-J6JM[1]	A	A	The	Yes	1/3
Flambeau 125520	-3 Port	1	CI	1 15/16x1 1/2	4.62	AF	2.5-4000	32	3-3/16	6 1/2	......	R	2	RR	7.00	......	......	......	Pl	Eis	Own	......	C	Ch-J8J	Pl	Pl	VP	No	5/8
174050	-3 Port	2	CI	1 15/16x1 1/2	9.24	AF	5.0-4000	36	3-3/16	8	......	R	2	RR	7.00	......	......	......	Pl	Eis	Own	......	C	Ch-J8J	Pl	Pl	VP	No	5/8
Johnson JW	Re-2 Port	2	ACS	1 9/16x1 3/8	5.28	AF	3.0-4000	34	2-3/32	6 1/8	6 1/4	R	2	RR	4.88	17-28	......	8620	Pl	Own	Own	......	C	Ch-J6J[1]	Pl	Pl	VP	Yes	1/3
CD	Re-2 Port	2	ACS	1 15/16x1 1/2	8.84	AF	5.5-4000	56	3-3/32	8	7 1/4	R	2	RR	34.00	15-26	......	8620	Pl	Own	Own	......	C	Ch-J6J[1]	Pl	Pl	VP	Yes	1/3
QD	Re-2 Port	2	ACS	2 3/8x1 7/8	16.60	AF	10.0-4500	67	3-3/32	8 1/4	8 1/2	R	3	RR	48.00	15-26	12.39	......	Pl	Own	Own	......	C	Ch-J6J[1]	PA	A	VP	Yes	1/3
FD	Re-2 Port	2	ACS	2 1/2x2 1/4	22.00	AF	18.0-4500	77	3-3/32	9 1/4	11	R	3	RR	48.00	15-26	11.11	......	Pl	Own	Own	......	C	Ch-J6J[1]	A	A	VP	Yes	1/3
RD	Re-2 Port	2	ACS	3 1/16x2 3/4	40.50	AF	35.0-4500	128	3-3/32	10 3/8	13 1/4	R	3	RR	48.00	12-21	......	8620 H	A	Own	Own	......	C	Ch-J6J[1]	A	A	VP	Yes	1/3
RDS	Re-2 Port	2	ACS	3 1/16x2 3/4	40.50	AF	35.0-4500	136	3-3/32	10 3/8	13 1/4	R	3	Ele	48.00	12-21	......	8620 H	A	Own	Own	......	C	Ch-J6J[1]	A	A	VP	Yes	1/3
V4	Re-2 Port	4	ACS	3x2 1/2	70.70	VT	50.0-4500	207	3-3/32	12 1/8	14	R	3	RR	48.00	17-29	......	......	A	Own	Own	......	C	Ch-J6J[1]	A	A	VP	Yes	1/3
V4S	Re-2 Port	4	ACS	3x2 1/2	70.70	VT	50.0-4500	215	3-3/32	12 1/8	14	R	3	Ele	48.00	17-29	......	......	A	Own	Own	......	C	Ch-J6J[1]	A	A	VP	Yes	1/3
Mercury Mark 6A	Re-2 Port	2	......	1 3/4x1 1/2	7.20	......	6.0-(c)	46	......	......	......	L	......	RR	3.2[7]	......	......	......	A	......	Til	......	C	......	A	A	VP	......	3/8
Mark 10A	Re-2 Port	2	......	2 5/16x2 3/16	18.50	......	10.0-(c)	77	......	......	......	L	......	RR	6.0[7]	......	......	......	A	......	Til	......	C	......	A	A	VP	......	3/8
Mark 15A	Re-2 Port	2	......	2 5/16x2 3/16	18.50	......	15.0-(c)	83	......	......	......	L	......	RR	6.0[7]	......	......	......	A	......	Til	......	C	......	A	A	VP	......	3/8
Mark 28A	Re-2 Port	2	......	2 9/16x2 1/8	22.00	......	22.0-(c)	88	......	......	......	L	......	RR	6.0[7]	......	......	......	A	......	Til	......	C	......	A	A	VP	......	3/8
Mark 35A	Re-2 Port	4	......	2 7/16x2 1/8	40.00	......	35.0-(c)	123	......	......	......	R	......	RR	6.0[7]	......	......	......	A	......	Til	......	C	......	A	A	VP	......	3/8
Mark 55A	Re-2 Port	4	......	2 9/16x2 1/8	44.00	......	40.0-(c)	125	......	......	......	R	......	RR	6.0[7]	......	......	......	A	......	Til	......	C	......	A	A	VP	......	3/8
Mark 58A	Re-2 Port	4	......	2 9/16x2 1/8	44.00	......	45.0-(c)	127	......	......	......	R	......	RR	6.0[7]	......	......	......	A	......	Til	......	C	......	A	A	VP	......	3/8
Mark 75A	Re-2 Port	6	......	2 9/16x2 1/8	66.00	......	60.0-(c)	185	......	......	......	L	......	Ele	6.0[7]	......	......	......	A	B-D	Til	......	C	......	A	A	VP	......	3/8
Mark 78A	Re-2 Port	6	......	2 9/16x2 1/8	66.00	......	70.0-(c)	188	......	......	......	L	......	Ele	6.0[7]	......	......	......	A	B-D	Til	......	C	......	A	A	VP	......	3/8
Neptune AA1-A	Re-2 Port	1	ACS	1 9/16x1 1/2	2.87	S	1.7-4000	17	2-3/32	6	5	L	2	Ro	2.00	13-20	14.00	......	Pl	Phe	Til	......	Fl	Ch-J8J	Pl	Pl	Cp	Yes	1/2
Oliver J4	Re-2 Port	2	ACS	2x1 1/2	9.42	AF	6.0-4500	50	2-1/16	7 1/2	6	L	2	RR	28.0	13-21	10.00	8615	PA	Scin	Til	3/4	C	Ch-J8JM	Pl	Pl	FVR	Yes	1/2
K4, K4E	Re-2 Port	2	ACS	2 1/2x2 1/32	19.94	AF	16.0-4500	78	2-1/16	9	11	L	2	ER	52.0	12-21	10.00	8615	PA	Scin	Til	1	C	Ch-H8JM	A	A	FVR	Yes	3/8
B2	Poppet	2	ACS	3 1/16x2 7/8	42.35	AF	35.0-4500	125	3*-3/32	10	13	L	3	Ele	52.0	13-21	8.00	8615	A	Scin	Til	1 7/16	C	Ch-D9JM	A	A	FVR	Yes	3/8
Scott[10] 3.6 HP	Re-2 Port	2	CI	2 1/8x1 3/4	6.23	S	3.6-4000	36	3-1/8	7 1/2	6	L	2	RR	8.0	13-21	12.56	8640	Pl	Phe	Til	9/16	C	Ch-H10JM	Pl	A	VP	No	1/2
5 HP[11]	Re-2 Port	2	CI	1 15/16x1 17/64	7.48	AF	5.0-4200	50	3-3/32	7 1/2	6	L	2	RR	24.0	13-21	10.75	8640	PA	Phe	Til	9/16	C	Ch-H10JM	PA	A	VP	Yes	1/2
7.5 HP[11]	Re-2 Port	2	CI	2x1 3/4	11.00	AF	7.5-4200	60	3-3/32	8	7	L	2	RR	48.0	13-21	10.75	8640	PA	Phe	Car	5/8	C	Ch-H10JM	Pl	A	VP	Yes	1/2
10 HP[11]	Re-2 Port	2	CI	2 11/64x2	14.82	AF	10.0-4200	65	3-3/32	7 7/8	9 1/2	L	2	RR	48.0	13-21	10.75	8640	PA	Phe	Car	3/4	C	Ch-H10JM	PA	A	VP	Yes	1/2
25 HP[11]	Re-2 Port	2	CI	2 51/64x2 7/16	29.96	AF	25.0-4800	107	3-3/32	9	10	R	3	ER	48.0	15-23	9.25	9310	A	Phe	Car	1 1/16	C	Ch-J6JM	A	A	VP	Yes	3/8
40 HP[11]	Re-2 Port	2	CI	3 1/8x2 3/4	42.18	AF	40.0-4800	(d)	3-3/32	10	12 1/2	R	3	ER	48.0	14-23	8.00	9310	A	PW	Car	1 3/16	C	Ch-J6JM	A	A	VP	Yes	3/8
60 HP[11]	Re-2 Port	3	CI	3 1/8x2 3/4	63.27	AF	60.0-4800	186	3-3/32	......	......	......	......	Ele	48.0	16-25	8.00	9310	A	B-D	Car	15/16	PC	Ch-J6JM	A	A	VP	Yes	3/8

West Bend	2901	Re-2 Port	1	ACS	1 3/4x1 9/16	3.76	S	2.0-4000	28	3-1/16	6 1/2	4	L	2	RR	5.0	14-21	12.00	4140	Pl	Wico	Til	1/2	C	Ch-H10J	Pl	Pl	Air	No	1/2
	6901, 6902	Re-2 Port	2	ACS	2x1 11/16	10.60	AF	6.0-4500	56	3-1/16	7 1/2	7	R	2	RR	34.0	14-23	12.00	4140	Pl	Wico	Til	1/2	C	Ch-H10J	PA	A	VP	Yes	1/2
	8901, 8902	Re-2 Port	2	ACS	2 1/8x1 11/16	11.97	AF	8.0-4500	57	3-1/16	8	8	R	2	RR	34.0	14-23	12.00	4140	Pl	Wico	Til	9/16	C	Ch-H8J	PA	A	VP	Yes	1/2
	12901[11], 12902[11]	Re-2 Port	2	ACS	2 3/8x2	17.72	AF	12.0-4000	59	3-1/16	8 1/2	8	R	3	RR	34.0	14-23	10.00	4140	PA	Wico	Til	3/4	C	Ch-H8J	A	A	VP	Yes	1/2
	16901[11]	Re-2 Port	2	ACS	2 7/16x2.140	19.96	AF	16.0-4750	64	3-1/16	8 1/2	8 1/2	R	3	RR	48.0	14-23	10.00	4140	PA	Wico	Til	3/4	C	Ch-H8J	A	A	VP	Yes	1/2
	35901[11], 35941[11]	Re-2 Port	2	ACS	3 1/8x2.706	41.49	AF	35.0-4500	114	3-3/32	10 1/2	12	R	3	RR	48.0	13-21	8.00	8620	A	FM	Til	1 3/32	C	Ch-H8J	A	PA	VP	Yes	1/2
	35921[11]	Re-2 Port	2	ACS	3 1/8x2.706	41.49	AF	35.0-4500	128	3-3/32	10 1/2	12	R	3	Ele	48.0	13-21	8.00	8620	A	FM	Til	1 3/32	C	Ch-H8J	A	PA	VP	Yes	1/2
	35961[11], 35981[11]	Re-2 Port	2	ACS	3 1/8x2.706	41.49	AF	35.0-4500	137	3-3/32	10 1/2	12	R	3	Ele	48.0	13-21	8.00	8620	A	Wico	Til	1 3/32	C	Ch-H8J	A	PA	VP	Yes	1/2
	40901[11]	Re-2 Port	2	ACS	3 1/8x2.750	42.18	AF	40.0-4750	114	3-3/32	10 1/2	12	R	3	RR	48.0	13-21	8.00	8620	A	FM	Til	1 3/32	C	Ch-H8J	A	PA	VP	Yes	1/2
	40961[11]	Re-2 Port	2	ACS	3 1/8x2.750	42.18	AF	40.0-3750	137	3-3/32	10 1/2	12	R	3	Ele	48.0	13-21	8.00	8620	A	Wico	Til	1 3/32	C	Ch-H8J	A	PA	VP	Yes	1/2

ABBREVIATIONS

*—Alternator generator.
1—Auto-Lite A3X and AC-M44C also used.
2—Not including separate fuel tank.
7—Separate gas tank.
10—Similar models produced under the trade names of Elgin and Wizard.
11—Also available with 5" longer leg.
(a)—Two piston engine, 1 7/8" plus 1 7/8".
(b)—Compression Diesel.
(c)—500 to 6000 Rpm.
(d)—131 lb. manual, 145 with electric starter.
A—Antifriction.
ACS—Aluminum with cast iron sleeves.
AF—Alternate firing.
B-D—Battery and Distributor.
C—Choke.
Car—Carter Carburetor Co.
Cen—Centrifugal.
Ch—Champion Spark Plug Co.
CI—Cast iron.
Cp—Cam pump.
Eis—Eiseman (Jack & Heintz Precision Ind.).
Ele—Electric.
ER—Eelectric and rewinding rope.
Fl—Flooding.
FM—Fairbanks, Morse & Co.
FVR—Flexible vane rotor.
L—Left.
PA—Plain and antifriction.
PC—Primer and Choke.
Phe—R. E. Phelon Co.
Pl—Plain.
Pr—Primer.
PW—Phelon and Wico.
R—Right.
Re—Reed valve.
Ro—Rope.
RP—Rotary pump.
RR—Rewinding rope.
S—Single.
Scin—Scintilla Magneto Div.
The—Thermostat.
Til—Tillotsen Mfg. Co.
VP—Vane pump.
VT—V4, 2 cycle.
Wico—Wico Electric Co.

Estimated Sales of Outboard Motors, and Number in Use, by Years

Compiled jointly by National Association of Engine & Boat Mfrs. and Outboard Boating Club of America

Year	Unit Sales	% of Sales by Hp. 0.0-6.9	7.0-14.9	15.0 & over	Avg. Hp. Units Sold	Outboard Motors in Use	Outboard Boat Sales	Boat Trailer Sales
1947	584,000	87%	11%	2%	4.7	1,857,000	143,000	3,790
1948	499,000	81%	16%	3%	5.2	2,321,000	198,000	5,700
1949	329,000	67%	28%	5%	6.4	2,643,000	171,000	8,285
1950	367,000	61%	30%	9%	6.9	2,811,000	131,000	18,390
1951	284,000	47%	37%	16%	8.9	3,010,000	154,000	20,380
1952	337,000	52%	33%	15%	8.4	3,219,000	164,000	39,220
1953	463,000	46%	33%	21%	9.0	3,419,000	231,000	72,000
1954	479,000	42%	34%	24%	10.3	3,740,000	223,000	103,000
1955	515,000	31%	32%	37%	12.9	4,210,000	258,000	129,000
1956	642,000	27%	35%	38%	14.2	4,740,000	302,000	151,000
1957	550,000	22%	27%	51%	16.3	5,140,000	320,000	165,000
1958*	545,000	17%	25%	58%	20.7	5,525,000	316,000	168,000

* Preliminary estimates.

DIESEL ENGINES FOR USE IN DIESEL-ELECTRIC LOCOMOTIVES

ENGINE MAKE AND MODEL		Cylinder Arrangement	Cycle	No. of Cylinders, Bore and Stroke (In.)	Displacement (Cu. In.)	Compression Ratio	Maximum Brake HP at Specified RPM	Continuous HP at Specified RPM	Supercharger Used	Weight (Lb.)	OVERALL DIMENSIONS (In.) Length	Width	Height
ALCO	251B	I	4	6-9x10 1/2	4008	13.00	1050-	-1025	Yes	22100	135 11/16	58 3/4	87 1/4
	251B	I	4	6-9x10 1/2	4008	13.00	975-	-1000	Yes	22100	135 11/16	58 3/4	87 1/4
	251B	V	4	12-9x10 1/2	8016	13.00	1950-	-1000	Yes	32650	157 3/4	70 1/2	93 5/16
	251B	V	4	16-9x10 1/2	10688	13.00	2600-	-1000	Yes	42000	197 5/16	70 1/2	99 3/4
	539	I	4	6-12 1/2x13	9572	12.50	1000-	- 740	Yes	34800	191	57 1/8	97
Cooper-Bessemer	FWB-6-LT	I	4	6-9x10 1/2	4008	12.70	1500-1200	1250-1100	Yes	22000	134	59 9/16	80 1/2
	FVBL-8-T	V	4	8-9x10 1/2	5344	12.70	2000-1200	1673-1100	Yes	21500	102 1/2	60	75 3/8
	FVBL-12-T	V	4	12-9x10 1/2	8016	12.70	3000-1200	2000-1100	Yes	28500	133 1/2	60	75 3/8
	FVBL-16-T	V	4	16-9x10 1/2	10688	12.70	4000-1200	3350-1100	Yes	35000	166 1/2	60	75 3/8
Electro-Motive	8-567C	V	2	8-8 1/2x10	4536	16.10		[1]900- 835	No[2]	18000	139 5/16	62 5/16	92 1/8
	12-567C	V	2	12-8 1/2x10	6804	16.10		[1]1200- 800	No[2]	25000	174 5/16	64 7/8	90 11/16
	12-567C	V	2	12-8 1/2x10	6804	16.10		[1]1310- 835	No[2]	25000	174 5/16	64 7/8	90 11/16
	16-567C	V	2	16-8 1/2x10	9072	16.10		[1]1750- 835	No[2]	32000	212 11/16	62 5/16	88 13/32
Fairbanks-Morse	6-38D8 1/8	O	2	6-8 1/8x10	6221	16.10	1290- 850	1290- 850	No[3]	26099	171 5/16	60	107 1/2
	8-38D8 1/8	O	2	8-8 1/8x10	8295	16.10	1720- 850	1720- 850	No[3]	33000	200 11/16	67	108 1/4
	10-38D8 1/8	O	2	10-8 1/8x10	10369	16.10	2150- 850	2150- 850	No[3]	38580	227 13/16	67	108 1/4
	12-38D8 1/8	O	2	12-8 1/8x10	12443	16.10	2580- 850	2580- 850	No[3]	44910	260 1/4	67	108 1/4

ABBREVIATIONS

1—Horsepower available for traction.
2—Engine has Roots type blower for scavenging use only; not supercharged.
3—Equipped with Roots type blower with three lobe spiral impellers.
I—In line.
O—Opposed piston.
V—"V" type engine.

For Directory of the Engine Manufacturers listed above, see Table of Contents.

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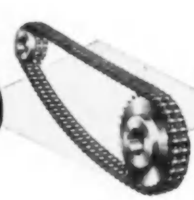
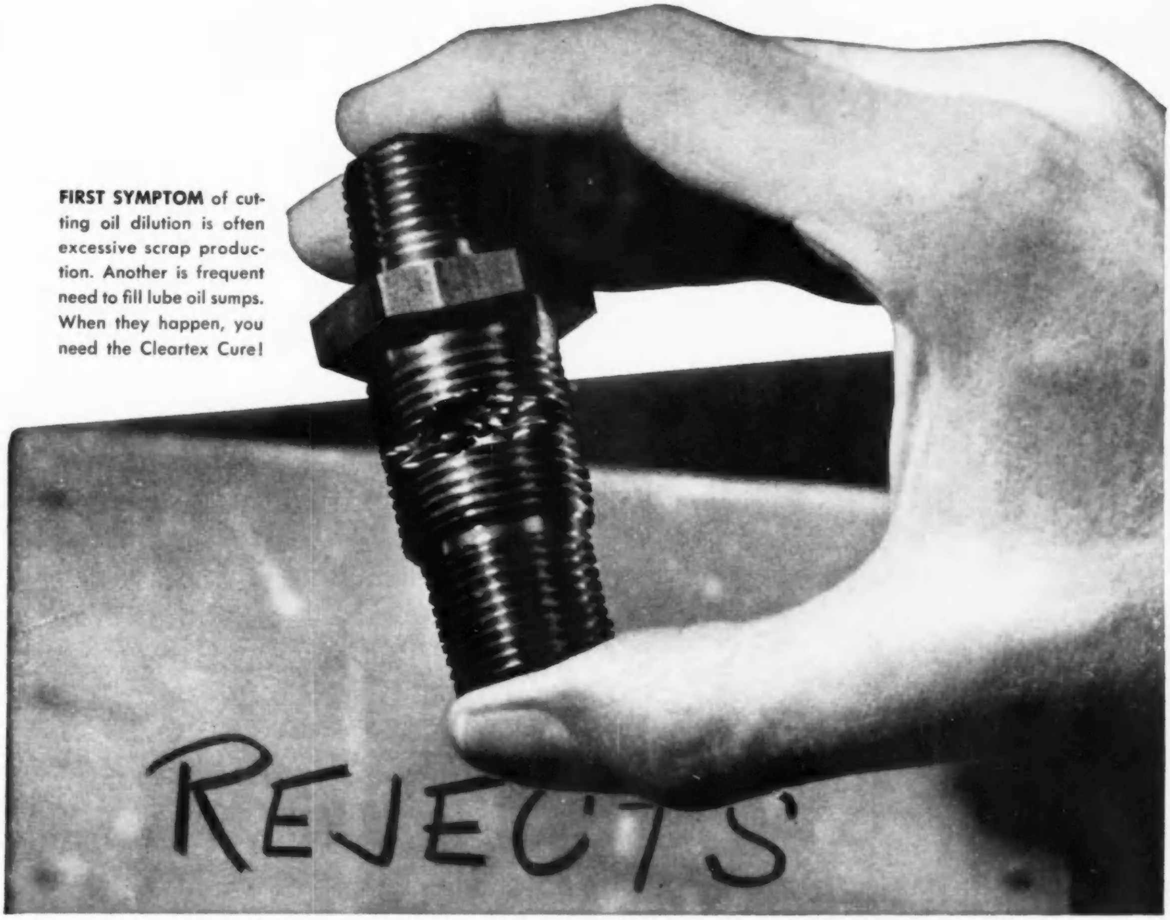
TIMING DRIVE CHAINS

DIAMOND



ROLLER CHAINS



FIRST SYMPTOM of cutting oil dilution is often excessive scrap production. Another is frequent need to fill lube oil sumps. When they happen, you need the Cleartex Cure!

Diluted cutting oil can pile up rejects

When you find your scrap production soaring, the villain may be lube oil leaking into the cutting oil sumps of your automatic screw machines. It happens in 7 out of 10 automatics in spite of the most careful lubricating techniques. This dilution will lower cutting oil effectiveness—and, as it loses its efficiency, rejects pile up, tool life drops, and production can go down by as much as 33 per cent!

Texaco Cleartex can solve the problem—forever!
Because of its exceptional stability and load-carrying ability, Cleartex can function *both* as a cutting oil *and* as a lubricant —and even as a hydraulic fluid. When *all* your automatics' sumps are filled with Cleartex, unavoidable leakage is no longer a problem. Excessive scrap production will stop, tools will last longer and production will go up.

TAKE THE "CLEARTEX CURE" SOON!
Write today for your copy of Texaco's new booklet—"Cleartex in Automatic Screw Machines." This new illustrated guide will fill you in on the details, show you where you may be losing profits and how to avoid it. Or contact your local Texaco Lubrication Engineer for an authoritative survey of your automatics. Just call the nearest of the more than 2,000 Texaco Distributing Plants, or write:

The Texas Company, 135 East 42nd Street, New York 17, N. Y., Dept. AI-31.

TUNE IN . . . Metropolitan Opera Radio Broadcasts Saturday Afternoons—CBS

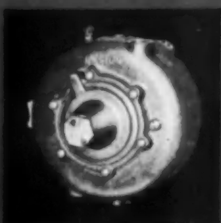
LUBRICATION IS A MAJOR FACTOR IN COST CONTROL

(PARTS, INVENTORY, PRODUCTION, DOWNTIME, MAINTENANCE)

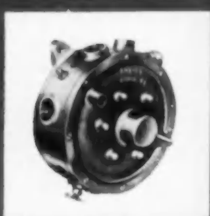
MODEL RW VAPORIZER-REGULATOR
Capacity 55 hp. For lift trucks, tractors, engine generators, etc.

MODEL HL VAPORIZER-REGULATOR
Capacity 200 hp. For trucks, passenger cars, stationary engines, etc.

MODEL VP REGULATOR
Capacity 55 hp. 2-stage vapor phase regulation.

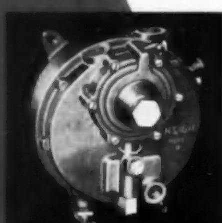


MODEL W VAPORIZER-REGULATOR
Capacity 55 hp. For tractors, power units, etc.



MODEL NS VAPORIZER-REGULATOR
Capacity 200 hp. For tractors, trucks, buses, stationary engines.

MODEL R VAPORIZER-REGULATOR
Capacity 125 hp. For tractors, trucks, stationary engines.



The ENSIGN *Showcase*

UNITS MOST FREQUENTLY USED

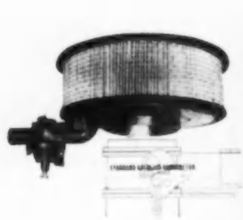
BY ENSIGN OEM* CUSTOMERS

Leading Supplier of LP-Gas Carburetion for

- Tractors • Stationary Engines
- Trucks • Fork Lifts • Buses

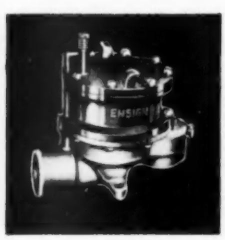
1 to 1000 HORSEPOWER

**OEM means Original Equipment Manufacturers' choice.*



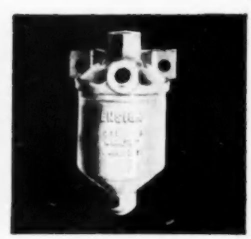
MODEL 758 GAS CARBURETOR
Low profile carburetor for automotive use.

VACUUM SWITCH
Double throw vacuum switch for use with solenoid type fuel shutoff.



MODEL B FUEL REGULATOR
Differential low pressure type. Accurately regulates fuel supply to carburetor. Sizes: 1, 2 and 2½ in.

MODEL F FUEL REGULATOR
Single diaphragm type. Accurately regulates flow of fuel to carburetor.



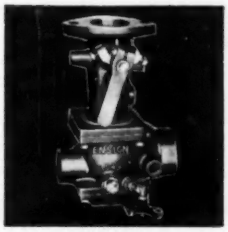
LP-GAS FILTER
Rugged bronze castings. Free flow element removes rust, scale and other foreign matter.

CARBURETION SPECIALISTS FOR NEARLY FIFTY YEARS

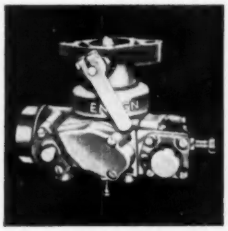
ENSIGN

LP-GAS CARBURETION

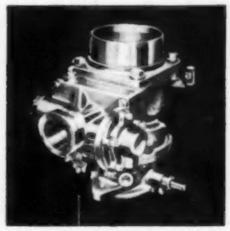
Accepted the World Over



MODEL KG1
GAS CARBURETOR
For updraft or downdraft. With easy starting device. Sizes: 1, 1¼, 1½, 1¾ and 2 in.



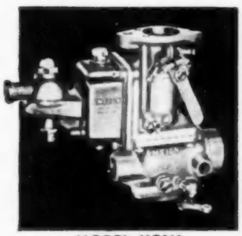
MODEL MG1
GAS CARBURETOR
Easy starting device. Built-in economizer. Sizes: ¾, 1 in.



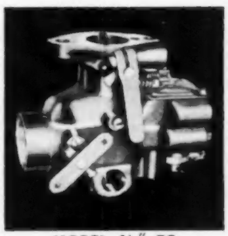
MODEL XG
GAS CARBURETOR
Updraft or downdraft. Easy starting device. Built-in economizer. Sizes: 1¼, 1½, 1¾ and 2 in.

MODEL XG1
GAS CARBURETOR
Easy starting device. Built-in economizer with internal connecting passageways. Sizes: 1¾, 2 in.

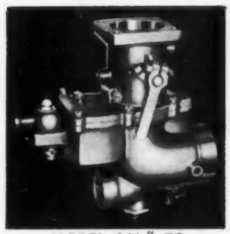
MODEL DG
GAS CARBURETOR
Updraft or downdraft. Easy starting device. Built-in economizer. Sizes: 2½, 3, 3½, 4 in.



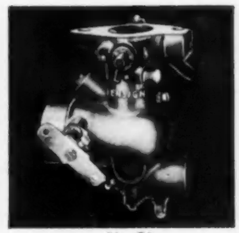
MODEL KGN1
COMBINATION CARBURETOR
For LPG, natural gas and gasoline. Updraft. Easy starting device. Sizes: 1, 1¼, 1½, 1¾ and 2 in.



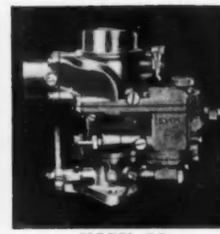
MODEL ¾″ TG
COMBINATION CARBURETOR
For LPG, natural gas and gasoline. For updraft only.



MODEL 2½″ TG
COMBINATION CARBURETOR
For LPG, natural gas and gasoline. For engines up to 250 hp. Updraft only.



¾ GI
GAS CARBURETOR
Updraft or downdraft. Easy starting device.



MODEL CG
COMBINATION CARBURETOR
For LPG, natural gas and gasoline. For downdraft only. Easy starting device. Sizes: 1¼, 1½, 1¾ and 2 in.

Greatest Names in GAS ENGINES

WAUKESHA • ALLIS-CHALMERS • CLIMAX • HERCULES

KOHLER • LUFKIN • WITTE • MINNEAPOLIS-MOLINE

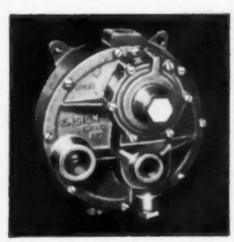
READY POWER • WISCONSIN • LE ROI • ONAN

WHITE (DIESEL ENGINE DIVISION) • CONTINENTAL

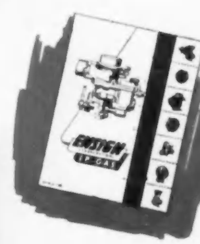
CATERPILLAR • CASE • AJAX • INTERNATIONAL

Standard of the Industry

AUTOMATIC FUEL SHUT-OFF VALVE
Vacuum controlled. No electrical connections. Positive in action. Foolproof.



MODELS HD and M VAPORIZERS
Capacity 150-450 hp. For multi-fuel installations.



ENSIGN MANUAL NO. 108
Complete colored brochure describing the entire line of ENSIGN LP-Gas Carburetion Equipment. Available upon request.

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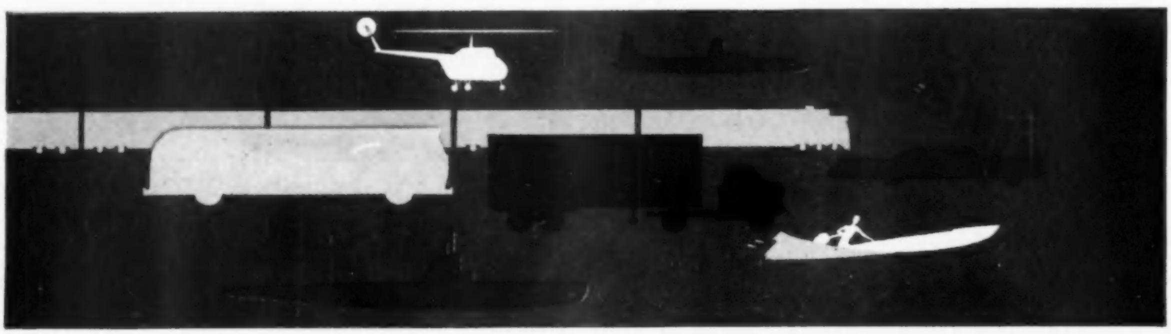
ENSIGN

CARBURETOR COMPANY

1551 E. Orangethorpe, Fullerton, California

Branch Factory: 2330 W. 58th Street, Chicago, Illinois

WHEN IT COMES TO DRIVES



ON THESE TYPES OF INTERNAL COMBUSTION ENGINES

YOU START BETTER WITH BENDIX

For nearly fifty years Bendix* Starter Drives have been the recognized standard drive for all types of internal-combustion engines. Besides their more than 125,000,000 automotive installations, these units have also been given top preference in such diversified fields as aircraft, locomotives, earth movers, inboard and outboard marine engines. The reason *has* to be that Bendix drives deliver superior performance and are more reliable. In other words you can start *better* with Bendix.

*REG. U. S. PAT. OFF.

Bendix-Elmira
ECLIPSE MACHINE DIVISION
ELMIRA, NEW YORK

Bendix
AVIATION CORPORATION

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Circle 187 on Inquiry Card, for more Data →

says Mr. Anthony Scelba, Industrial Engineer of Leslie Co., Lyndhurst, New Jersey, manufacturers of regulators and controllers for industrial and marine steam systems.

Combining a specially designed indexing fixture, which permits indexing the piece in increments of 45° and with the automatic features of Cut Master, every piece leaving the machine is completely finished on all surfaces. This reduces the number of set-ups, for instance, on a four way valve from four set-ups to one. In this manner, production is controlled and a minimum inventory required.

Similar cost saving methods can be applied to your machining problems just call your nearest Bullard Sales Office or Distributor.

THE BULLARD COMPANY
BRIDGEPORT 9, CONNECTICUT

why more designs for '59s use LINK-BELT timing chains

factory-engineered timing is assured for thousands of miles of car operation

Again this year, leading automotive manufacturers have included Link-Belt Timing Chain in their plans for long life, smoother operation and peak timing drive performance.

Link-Belt offers segmental bushings for automatic joint snugness, with no "slap" on the nonload side. Built-in check in joints permits forward articulation for sprocket contact without back-bend.

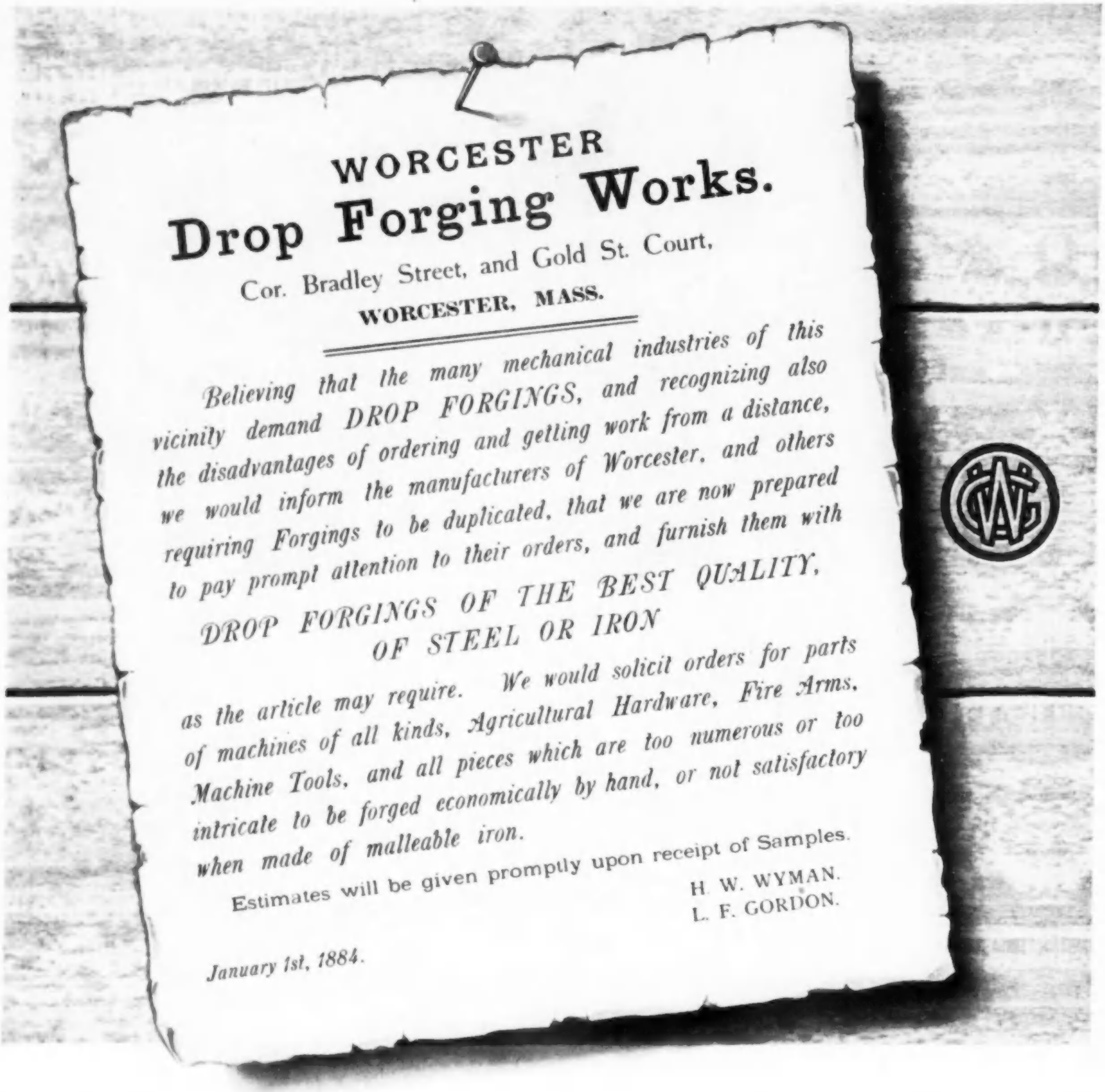
Let our engineers show you how this space-saving 11/16-in. chain can fit into your plans. Specifications are available in Book 2065. Write for your copy.

LINK-BELT

TIMING CHAIN AND SPROCKETS

LINK-BELT COMPANY: 220 South Belmont Ave., Indianapolis 6, Ind. 15,017


OUR SPECIALTY
...better rings from better metals
What's behind a better ring? For one thing, a superior metal like electric-furnace PHOSALLOY—another McQuay-Norris exclusive that gives rings unusual toughness and tension-retaining qualities!...Let one of our sales engineers give you the whole story. Let him show you how we work with original equipment designers to get the results they must have. Call us next time you have a piston ring problem.
McQUAY-NORRIS
MANUFACTURING CO., ST. LOUIS • TORONTO
Largest Producer of small rings in the automotive industry.



WORCESTER
Drop Forging Works.
Cor. Bradley Street, and Gold St. Court,
WORCESTER, MASS.

Believing that the many mechanical industries of this vicinity demand DROP FORGINGS, and recognizing also the disadvantages of ordering and getting work from a distance, we would inform the manufacturers of Worcester, and others requiring Forgings to be duplicated, that we are now prepared to pay prompt attention to their orders, and furnish them with

DROP FORGINGS OF THE BEST QUALITY, OF STEEL OR IRON

as the article may require. We would solicit orders for parts of machines of all kinds, Agricultural Hardware, Fire Arms, Machine Tools, and all pieces which are too numerous or too intricate to be forged economically by hand, or not satisfactory when made of malleable iron.

Estimates will be given promptly upon receipt of Samples.

H. W. WYMAN.
L. F. GORDON.

January 1st, 1884.

Reproduced above is the formal announcement made January 1, 1884 of the partnership formed a few weeks previously in November of 1883 and known as the Worcester Drop Forging Works, later to be incorporated as Wyman & Gordon.

Today, after seventy-five years, Wyman-Gordon is still "prepared to pay prompt attention" to *your* orders and to furnish "forgings of the best quality," not only of steel, but of light alloys and all of the new exotic heat-resisting materials including beryllium.

And through the years Wyman-Gordon has continued to concentrate on one product—forgings; and one standard of quality and service—the best.

WYMAN-GORDON COMPANY

Established 1883

FORGINGS OF ALUMINUM • MAGNESIUM • STEEL • TITANIUM
Also Beryllium • Molybdenum • Columbium and Other Uncommon Materials

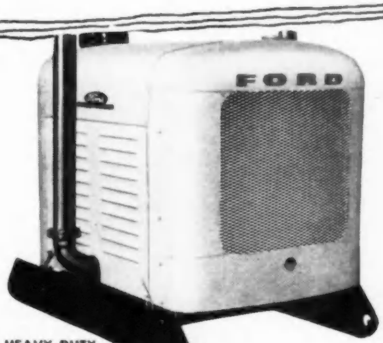
WORCESTER 1, MASSACHUSETTS
HARVEY, ILLINOIS • DETROIT, MICHIGAN

Circle 190 on Inquiry Card, for more Data

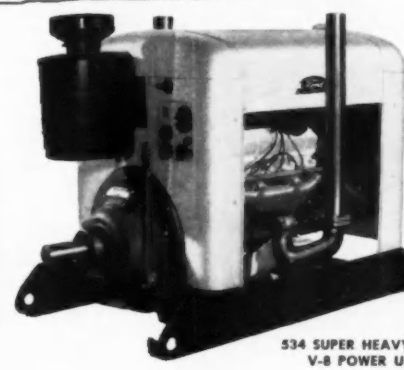
330 DIESEL SIX-CYL.
POWER UNIT

401 SUPER HEAVY DUTY
V-8 POWER UNIT

Announcing...the addition of four new FORD Heavy Duty Power Units!



477 SUPER HEAVY DUTY
V-8 POWER UNIT



534 SUPER HEAVY DUTY
V-8 POWER UNIT

Now . . . all Ford Industrial Engines are available as engine assemblies or power units!

220 DIESEL 4-CYL.
POWER UNIT

134 4-CYL.
POWER UNIT

172 4-CYL.
POWER UNIT

223 6-CYL. POWER UNIT

272 V-8 POWER UNIT

332 V-8 POWER UNIT

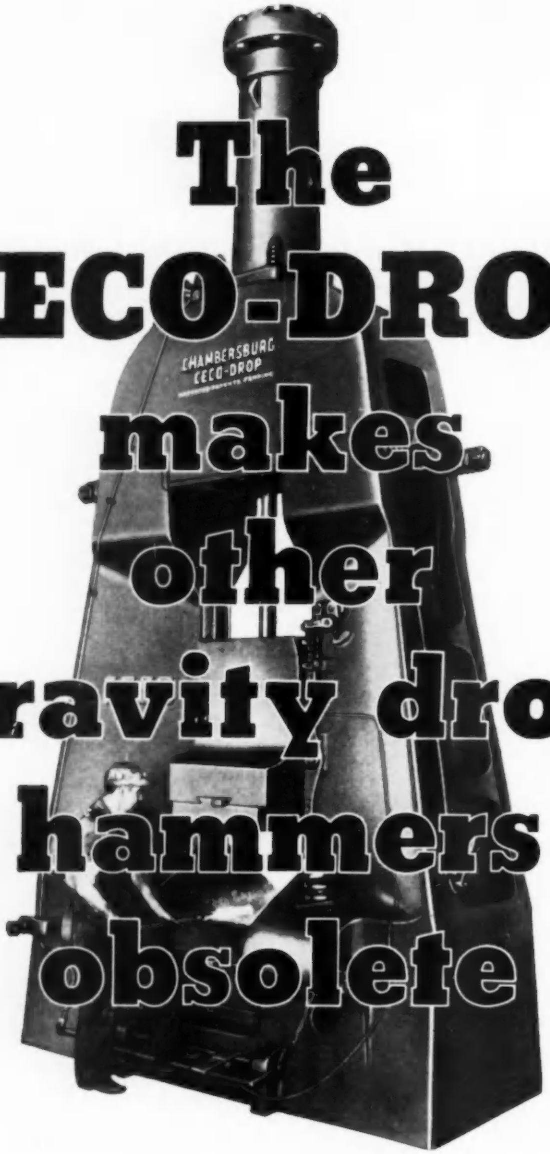
● These four new power units are built to handle your toughest work dependably and at low cost. Now from 134 to 534 cubic inches, there's a Ford power unit *right* for your job. The Super Heavy Duty V-8's, for example, offer many advances like fully machined combustion chambers, new fuel and lubrication systems, and more horsepower per pound of engine weight than ever before.

Ford power units and engine assemblies are available with SAE housings, HD power take-offs, and 5- and 8-speed transmissions. The 3 Super Heavy Duty V-8's can be equipped with a new 6-speed Transmatic Drive. And for fast parts delivery or on-the-job repairs, remember, there's always a Ford Dealer nearby to give the service you need *when* you need it.

Ford
INDUSTRIAL ENGINES
AND POWER UNITS

INDUSTRIAL ENGINE DEPARTMENT ● FORD Division of FORD MOTOR COMPANY
P. O. Box 598, Dearborn, Michigan

YOUR JOB IS WELL-POWERED WHEN IT'S FORD-POWERED!



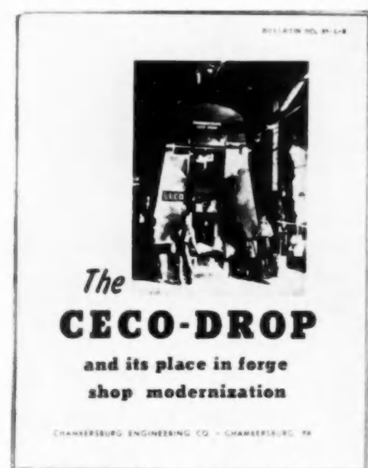
The CECO-DROP makes other gravity drop hammers obsolete

THIS is no mere slogan; it is a statement of fact. Since its introduction twelve years ago, the Ceco-Drop, in installation after installation, has proved its greater productive capacity and its economy over any other gravity drop hammer.

These are not unsupported claims. They are backed up by testimonials from users: like **"increased production over board drop between 10-20%"**; "die life on the Ceco-Drop is nearly double"; **"the first two Ceco-Drops have saved approx. $3000 each** in maintenance and boards in first year"; "after approx. 1200 production hours, one Ceco-Drop had total of less than 10 hours maintenance"; **"I would give a good deal if I had all of our board hammers out of the shop and nothing but Ceco-Drops"**; and hundreds of others.

To convince yourself, you should read Chambersburg's 28-page bulletin on Forge Shop Modernization.

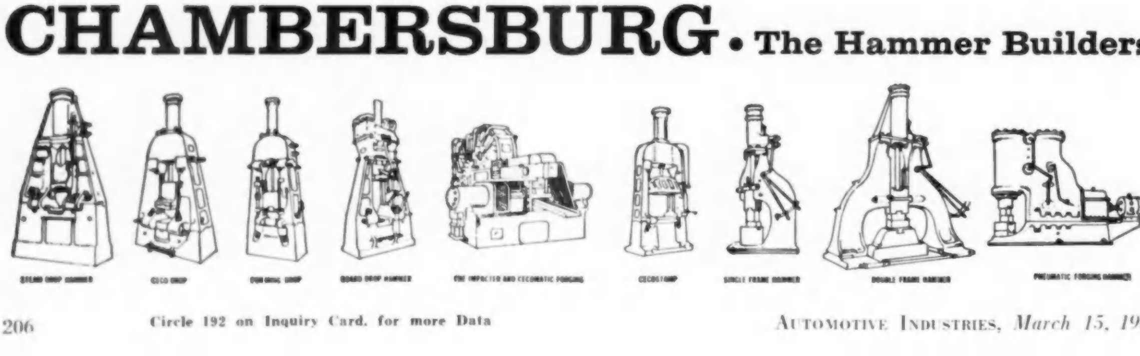
Send for your copy today.

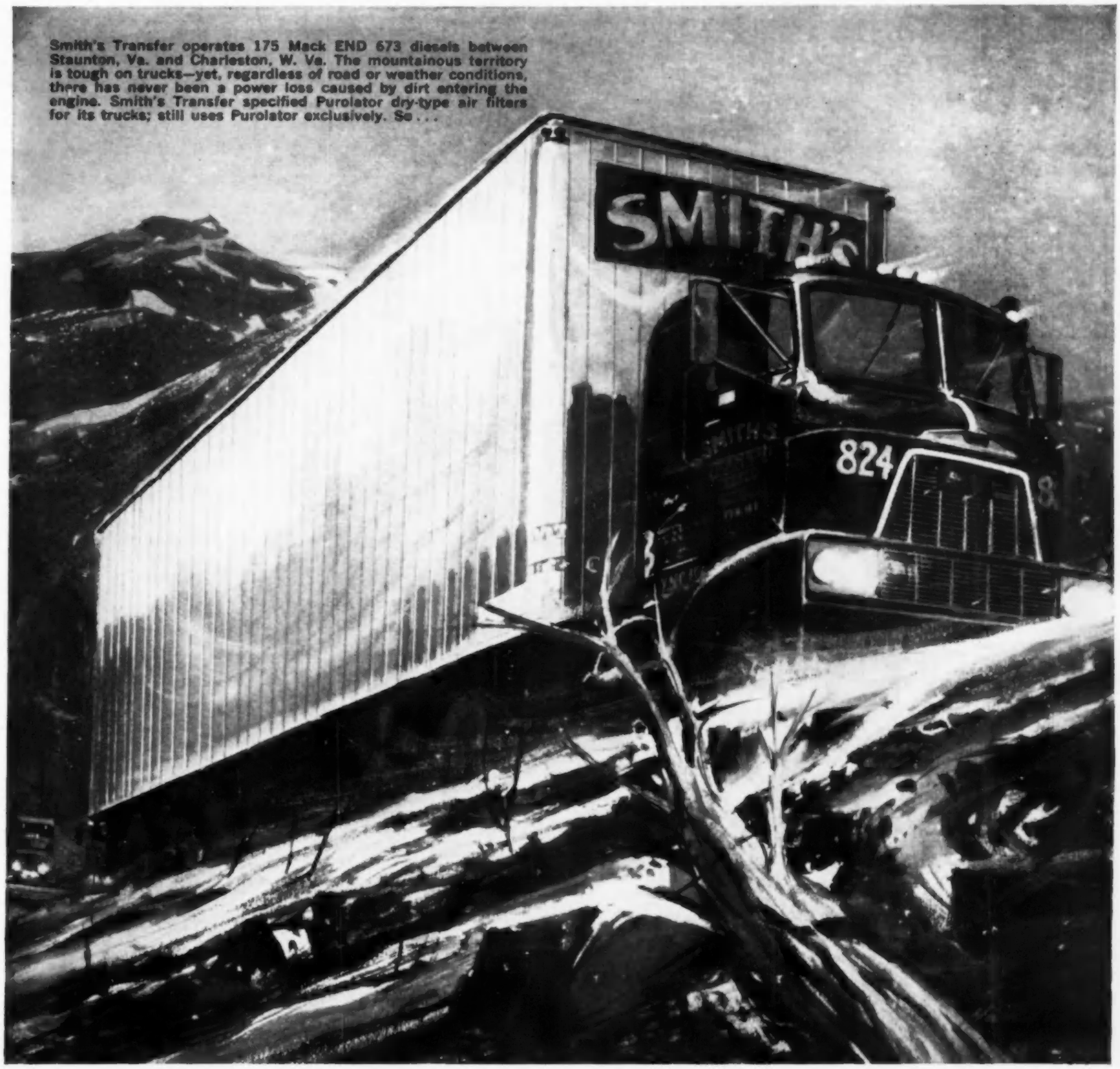


The
CECO-DROP
and its place in forge shop modernization

CHAMBERSBURG ENGINEERING COMPANY . . . . CHAMBERSBURG, PENNSYLVANIA

CHAMBERSBURG • The Hammer Builders





When your customers specify Purolator Air Filters there's good reason for it:

"The engines on our Mack diesels show no measurable wear on rings, walls or valves . . . even after 250,000 miles"

Merle W. Bogan, Service Manager, Smith's Transfer

Mr. Bogan always specifies Purolator because he realizes the importance of effective air filtration. He knows Purolator air filters prolong engine life, cut maintenance costs and reduce downtime to a minimum.

This is why you can be confident that any customer's specification is justified when, like Mr. Bogan, he insists on Purolator filters. What's more, you can confidently recommend Purolator dry-type air filters as original equipment in your own standard line of diesels.

A Purolator engineer will be glad to present further details about the advantages and economies of Purolator filtration in the diesels you make. There's a Purolator filter designed to meet your requirements. Write or phone for full information — right now.

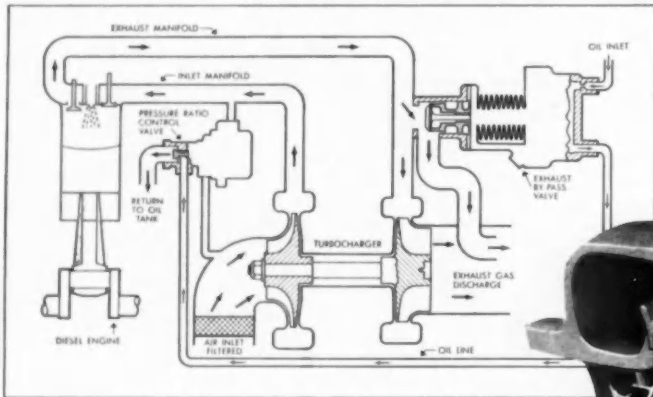
Filtration For Every Known Fluid **PUROLATOR**

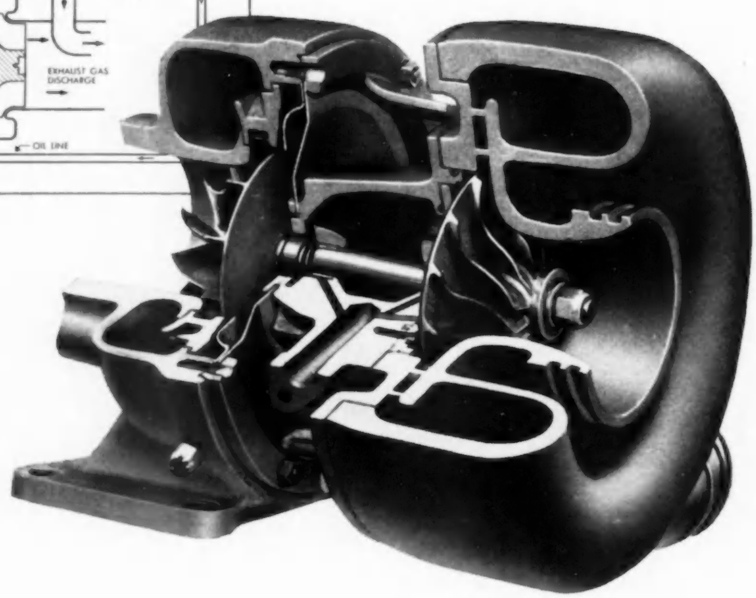
PRODUCTS, INC.

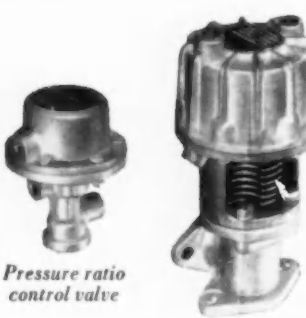
RAHWAY, NEW JERSEY AND TORONTO, ONTARIO, CANADA

Circle 193 on Inquiry Card, for more Data

Most significant advances in turbocharging







Pressure ratio control valve

Exhaust by-pass valve

AiResearch Industrial Division has made these vital contributions to the diesel industry

- provides the most economical turbocharging of diesel engines 50 to 700 H.P....
- designed and manufactured the first successful air-cooled turbocharger...
- built the first pressure-ratio control system to keep the turbocharger operating at peak efficiency continuously...
- developed the "free vortex" principle to replace the vaned nozzle, substantially decreasing the cost of small turbochargers...
- uses compressors with exceptionally broad characteristics to give best efficiency over a wide range of engine operation...
- has delivered more than 20,000 turbochargers in the last five years...
- currently turbocharges more than six million horsepower in diesel equipment...
- sells turbochargers and turbocharger control systems to 21 major engine manufacturers.

Your inquiries are invited.

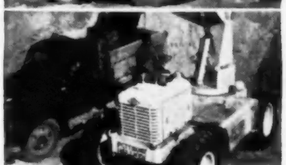
THE GARRETT CORPORATION

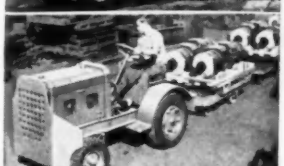
AiResearch Industrial Division

9225 South Aviation Blvd., Los Angeles 45, California

DESIGNERS AND MANUFACTURERS OF TURBOCHARGERS AND SPECIALIZED INDUSTRIAL PRODUCTS







CHRYSLER

INDUSTRIAL ENGINES

here's why more and more manufacturers and owners of heavy-duty equipment are powering with big output, low cost Chrysler Industrial Engines.

1. Greater endurance: Chrysler Industrial Engines are high-speed, heavy-duty power plants built to stand up under the toughest jobs.
2. Greater efficiency: Chrysler Ind. 56A, for example, has oversquare, short-stroke design that cuts friction loss to a minimum; hemispherical-design combustion chambers produce more power with less heat loss.
3. Greater adaptability: Chrysler Engines can be tailored to your individual requirements with Chrysler optional equipment. All are available as open or closed power units; operate at full efficiency on gasoline, natural or L-P gas.

OPTIONAL EQUIPMENT AVAILABLE ON CHRYSLER INDUSTRIAL ENGINES

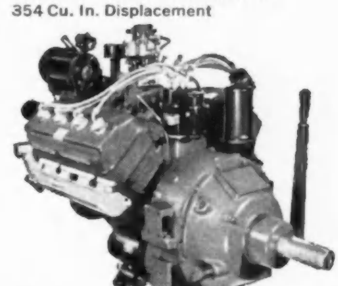
- Chrysler Torque Converter
- Corrosion and Fungus Resistant Electrical System
- Fluid Coupling
- Heavy-Duty Over-Center Clutch and Power Takeoff
- Mechanical or Velocity Governor
- Radio Shielding (24 volt)
- 3, 4 or 5 Speed Transmission
- Propane or Natural Gas Burning Carburetors
- Heavy-Duty, Oil Bath Air Cleaner
- Safety Switches (Low Oil Pressure, High Water Temperature)

INDUSTRIAL ENGINE DIVISION
CHRYSLER CORP., DETROIT 31, MICH.

SEE SPECIFICATIONS AND PERFORMANCE DATA PAGES 174-175

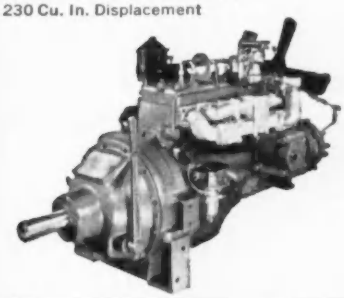
two V-8 models

SHOWN: CHRYSLER IND. 56A
354 Cu. In. Displacement



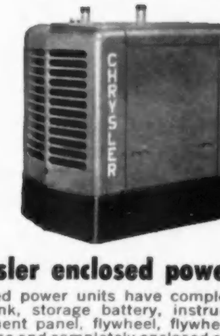
four in-line 6 models

SHOWN: CHRYSLER IND. 31
230 Cu. In. Displacement



Chrysler open power units

Open power units for all engines include complete engine, plus skid base, fuel tank, radiator, instrument panel—complete with instruments—mounted on flywheel housing.



Chrysler enclosed power units

Enclosed power units have complete engine, fuel tank, storage battery, instruments and instrument panel, flywheel, flywheel housing, skid base and completely enclosed sheet metal.

 Circle 195 on Inquiry Card, for more Data

WAUKESHA

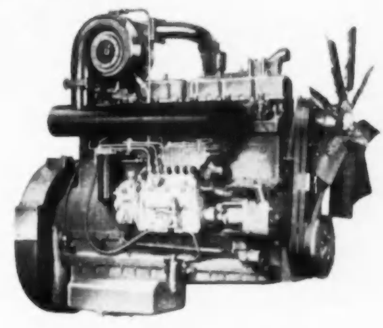
transport ENGINES

OVER THE ROAD OR OFF THE HIGHWAY

the BEST in all three!

DIESEL

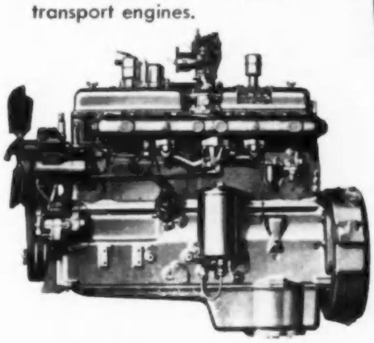
... in and out ... down and up ... over and through ... go the trucks with Waukeshas—putting out the power that pulls and pays.



Normal or Turbocharged DIESELS from 60 to 350 hp.
Model shown is 148-DKBS—
280 max. hp. 5¼ x 6 bore and stroke—779 cu. in. displacement.

GASOLINE

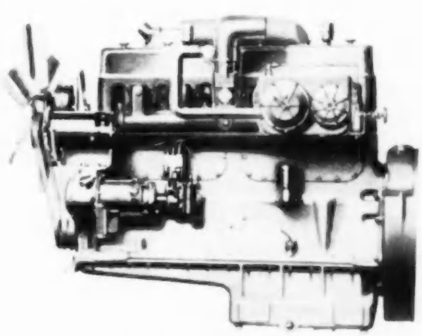
... where the pay-off is on payload — you'll make more miles and cut costs too, with these modern feature-packed transport engines.



High Torque GASOLINE Engines from 30 to 280 hp.
Model shown is 140-GZ—
170 max. hp. 4⅝ x 5½ bore and stroke—554 cu. in. displacement.

LP-GAS

... those tremendous, crushing 30-ton, 35-ton, 40-ton loads ... up stiff grades, without faltering or breakdown ... day after day—with Waukesha.



BUTANE-PROPANE Engines from 40 to 300 max. hp.
Model shown is WAKB—
300 max. hp. 6¼ x 6½ bore and stroke—1197 cu. in. displacement.

Send for Engine Bulletins

WAUKESHA MOTOR COMPANY, WAUKESHA, WISCONSIN
New York • Tulsa • Los Angeles
Factories: Waukesha, Wisconsin and Clinton, Iowa

417

ZENITH EXPERIENCE WITH CARBURETORS PAYS OFF IN ANY FIELD

Massey-Ferguson Combines and LP Tractors

Caterpillar Tractors
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Buda Engines
Lincoln Welders
Thew Shovels
Kohler Generators
Clark Lift Trucks
Duplex Trucks

General Motors Trucks
Continental Engines
American LaFrance Fire Engines
Ford L-P Gas Tractors
Gray Marine Engines
Checker Cabs
Palmer Marine Engines
Gravely Tractors
Waukesha Engines
Divco Trucks
Four Wheel Drive Trucks
Towmotor Lift Trucks
Yale & Towne Trucks
Frank Hough Trucks
Harnischfeger Cranes
Owens Yachts
Onan Generators
Oshkosh Trucks
Diamond T Trucks
Schramm Air Compressors
Reo Trucks

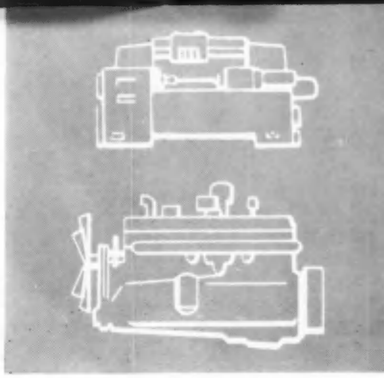
Seagrave Fire Engines

If you are interested in engine performance, you'll be interested in what Zenith® experience can do for you. Trucks . . . buses . . . tractors . . . industrial engines . . . boats . . . off-the-road vehicles—the record shows Zenith has more experience in designing and building carburetors in more different fields than any manufacturer you can name!

Because Zenith can call upon so much experience with more types of engines, the above firms know they are in good hands when they specify Zenith Carburetors. As you, too, will discover: *Zenith experience provides important extra benefits.* For detailed information, write Zenith Carburetor Division, 696 Hart Avenue, Detroit 14, Michigan.

Zenith Carburetor Division
DETROIT 14, MICHIGAN

Bendix
AVIATION CORPORATION



3

AVIATION SECTION

AIRCRAFT AND AIRCRAFT ENGINES

AUTOMOTIVE INDUSTRIES STATISTICAL ISSUE

FORTY-FIRST ANNUAL

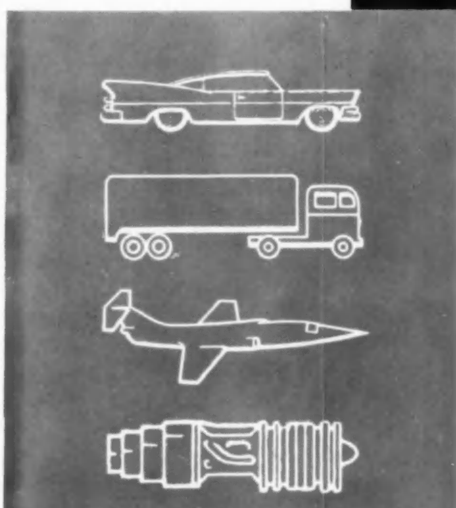
PRODUCTION

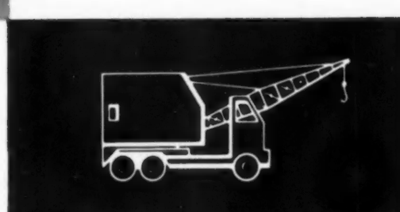
REGISTRATIONS

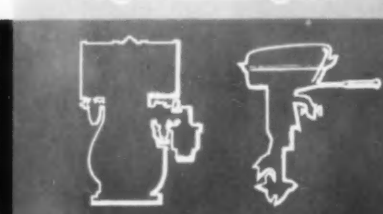
AIRPORTS AND LANDING FIELDS

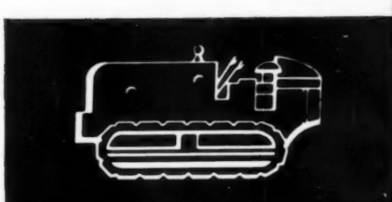
AIR CARRIER STATISTICS

SPECIFICATIONS



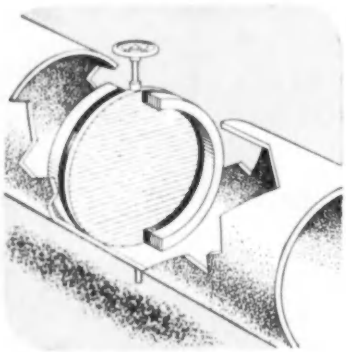




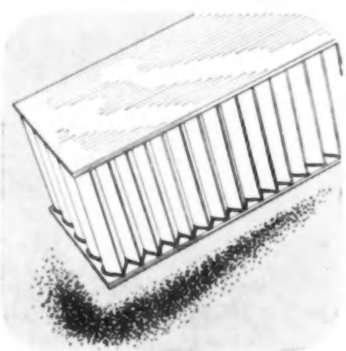


Tailored R/M *Ray-BOND*® Adhesives speed and simplify your production, cut your costs

Sealing hundreds of wires with an R/M encapsulating compound.



Bonding rubber seals to rotating water gate valves.



Resin-treated paper bonded to metal saves weight in this honeycomb.

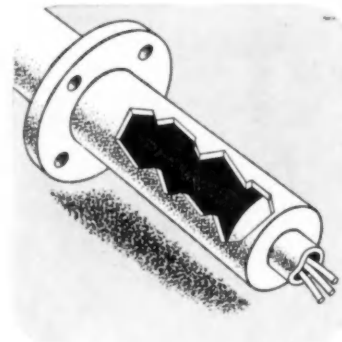
For these and 1001 other applications, new R/M Ray-BOND adhesives can be tailored to your needs

Adhesive bonding offers you many advantages. Because it eliminates rivets and other fasteners, your production costs are reduced and many assemblies otherwise difficult or impossible can be done with ease. With Ray-BOND adhesives, you can join dissimilar materials. Where unusually high or low temperatures constitute a problem, adhesive bonding frequently furnishes the ideal solution. It provides better heat conductivity, seals gaps and voids in metal products, and increases the life of friction members.

Ray-BOND Adhesives have proved themselves in a great variety of applications, and on products ranging from sewer pipes to snow trains, from ribbons to tool tips, from submarines to aircraft. They have been chosen because they resist temperatures as low as -80°F or as high as 700°F.

Raybestos-Manhattan offers you the benefit of more than 20 years of experience and pioneering in the production of bonded assemblies and the manufacture of adhesives and coatings. Feel free to call on R/M engineers for their help.

Write now for your free copy of R/M Bulletin 700, containing engineering information on Ray-BOND adhesives, protective coatings and sealers.



Bonding vinyl jacket and steel gland in cable —protecting against moisture and corrosion.

Bonding brake linings for sub-zero operation in snow train.

Making weatherproof bond between sealer strip and car door.

R/M

RAYBESTOS-MANHATTAN, INC.

ADHESIVES DEPARTMENT: Bridgeport, Conn.

Chicago 31 • Detroit 2 • Cleveland 16 • Los Angeles 58

FACTORIES: Bridgeport, Conn.; Manheim, Pa.; Passaic, N.J.; No. Charleston, S.C.; Crawfordsville, Ind.; Neenah, Wis.; Paramount, Calif. Raybestos-Manhattan (Canada) Limited, Peterborough, Ontario, Canada

RAYBESTOS-MANHATTAN, INC., Industrial Adhesives • Brake Linings • Brake Blocks • Clutch Facings • Industrial Rubber • Engineered Plastics • Sintered Metal Products Rubber Covered Equipment • Asbestos Textiles • Laundry Pads and Covers • Packings • Abrasive and Diamond Wheels • Bowling Balls

Aircraft and Aircraft Engine Shipments by Years

As reported by the Industry Division, Bureau of the Census and the Aircraft Industries Association

	Aircraft			Aircraft Engines				Value of All Products
	Total	Civil	Military	Total	Civil	Military		
1939	5,856	3,661	2,195	11,172	N.A.	N.A.		‡ —
1940	12,813	6,785	6,028	30,167	7,500ᵉ	22,667		—
1941	26,289	6,844	19,445	64,681	6,500ᵉ	58,181		1,804,000,000
1942	47,675	N.P.	47,675	138,089	N.P.	138,089		5,817,000,000
1943	85,433	N.P.	85,433	227,116	N.P.	227,116		12,514,000,000
						Piston	Jet	
1944	95,272	N.P.	95,272	256,911	N.P.	256,789	122	16,047,000,000
1945	48,912	2,047	46,865	110,650	2,000ᵉ	108,442	1,208	8,729,000,000
1946	36,418	35,001	1,417	43,407	40,822	1,680	905	N.A.
1947	17,739	15,617	2,122	20,912	16,351	2,683	1,878	1,241,000,000
1948	9,838	7,302	2,536	14,027	9,039	2,495	2,493	1,158,000,000
1949	6,137	3,545	2,592	11,972	3,982	2,981	5,009	1,781,000,000
1950	6,293	3,520	2,773	13,675	4,314	3,122	6,239	2,274,000,000
1951	7,923	2,477	5,446	20,867	4,580	6,471	9,816	3,456,000,000
1952	12,811	3,509	9,302	31,041	5,382	8,731	16,928	6,495,000,000
1953	14,760	4,134	10,626	40,263	6,647	13,365	20,251	8,511,000,000
1954	12,129	3,389	8,740	26,959	5,519	7,868	13,572	8,305,000,000
1955	12,852	4,820	8,032	21,108	7,639	3,874	9,595	8,470,000,000
1956	14,005ᵉ	7,205	6,800ᵉ	22,999	11,499	3,000ᵉ	8,500ᵉ	9,496,000,000
1957	12,245ᵉ	6,745	5,500ᵉ	21,559	10,859	2,500ᵉ	8,200ᵉ	11,766,000,000
1958	10,860ᵉ	6,860	4,000ᵉ	10,233	10,233	N.A.	N.A.	11,500,000,000*

ᵉ—Estimated by Aircraft Industries Association. N.P.—No civil production. N.A.—Not available. ‡—Net Sales value of shipments of all products of aircraft, aircraft engines, propeller and aircraft parts plants. *—Estimated on basis of returns for nine months.

Value of Net Sales of Complete Aircraft, Aircraft Engines, and Propellers

Based on data from the Industry Division, Bureau of the Census

Product and Type of Customer	NET SALES (In Thousands of Dollars) Nine Months 1958	Nine Months 1957	For Full Year 1957	1956	1955	1954
Complete Aircraft and Parts						
For U. S. Military Customers	$3,964,000	$4,041,000	$5,607,000	$4,740,000	$4,605,000	$4,626,000
For Other Customers	768,000	913,000	1,165,000	814,000	559,000	600,000
Total—Aircraft and Parts	$4,732,000	$4,954,000	$6,772,000	$5,554,000	$5,164,000	$5,226,000
Aircraft Engines and Parts						
For U. S. Military Customers	$1,392,000	$1,524,000	$2,137,000	$1,718,000	$1,728,000	$1,872,000
For Other Customers	233,000	291,000	390,000	317,000	205,000	190,000
Total—Engines and Parts	$1,625,000	$1,815,000	$2,527,000	$2,035,000	$1,933,000	$2,062,000
Aircraft Propellers and Parts						
For U. S. Military Customers	$106,000	$97,000	$140,000	$101,000	$112,000	$151,000
For Other Customers	27,000	32,000	43,000	35,000	22,000	32,000
Total—Propellers and Parts	$133,000	$129,000	$183,000	$136,000	$134,000	$183,000
Total—U. S. Military Customers	$5,462,000	$5,662,000	$7,884,000	$6,559,000	$6,445,000	$6,649,000
Total—Other Customers	$1,028,000	$1,236,000	$1,598,000	$1,166,000	$786,000	$822,000
Other Products and Services	$1,951,000	$1,735,000	$2,284,000	$1,771,000	$1,239,000	$834,000
Total—All Products	$8,441,000	$8,633,000	$11,766,000	$9,496,000	$8,470,000	$8,305,000

Value of Net New Orders of Complete Aircraft, Aircraft Engines, and Propellers

Based on data from the Industry Division, Bureau of the Census

Product and Type of Customer	NET NEW ORDERS (In Thousands of Dollars) First Nine Months 1958	First Nine Months 1957	During Complete Years 1957	1956	1955	1954
Complete Aircraft and Parts						
For U. S. Military Customers	$2,958,000	$1,826,000	$3,196,000	$4,864,000	$3,454,000	$3,655,000
For Other Customers	728,000	750,000	1,063,000	1,765,000	1,744,000	606,000
Total—Aircraft and Parts	$3,686,000	$2,576,000	$4,259,000	$6,629,000	$5,198,000	$4,261,000
Aircraft Engines and Parts						
For U. S. Military Customers	$738,000	$683,000	$1,200,000	$2,304,000	$1,652,000	$725,000
For Other Customers	209,000	184,000	232,000	735,000	413,000	160,000
Total—Engines and Parts	$947,000	$867,000	$1,432,000	$3,039,000	$2,065,000	$885,000
Aircraft Propellers and Parts						
For U. S. Military Customers	$31,000	$103,000	$119,000	$141,000	$57,000	$121,000
For Other Customers	20,000	24,000	31,000	56,000	20,000	31,000
Total—Propellers and Parts	$51,000	$127,000	$150,000	$197,000	$77,000	$152,000
Total—U. S. Military Customers	$3,727,000	$2,612,000	$4,515,000	$7,309,000	$5,163,000	$4,501,000
Total—Other Customers	$957,000	$958,000	$1,326,000	$2,556,000	$2,177,000	$797,000
Other Products and Services	$2,343,000	$1,114,000	$2,095,000	$2,276,000	$1,983,000	$1,011,000
Total—All Products	$7,027,000	$4,714,000	$7,936,000	$12,141,000	$9,323,000	$6,309,000

• AIRCRAFT SHIPMENTS •

Value of Backlog of Orders for Complete Aircraft, Aircraft Engines, and Propellers

Based on data from the Industry Division, Bureau of the Census

Product and Type of Customer	BACKLOG OF ORDERS (In Thousands of Dollars)					
	September 30		As of December 31			
	1958	1957	1957	1956	1955	1954
Complete Aircraft and Parts						
For U. S. Military Customers	$5,431,000	$6,622,000	$6,426,000	$8,837,000	$8,717,000	$9,868,000
For Other Customers	2,759,000	2,744,000	2,805,000	2,907,000	1,956,000	771,000
Total—Aircraft and Parts	$8,190,000	$9,366,000	$9,231,000	$11,744,000	$10,673,000	$10,639,000
Aircraft Engines and Parts						
For U. S. Military Customers	$1,730,000	$2,475,000	$2,379,000	$3,316,000	$2,730,000	$2,806,000
For Other Customers	566,000	642,000	591,000	749,000	331,000	123,000
Total—Engines and Parts	$2,296,000	$3,117,000	$2,970,000	$4,065,000	$3,061,000	$2,929,000
Aircraft Propellers and Parts						
For U. S. Military Customers	$51,000	$152,000	$125,000	$146,000	$106,000	$161,000
For Other Customers	25,000	37,000	33,000	45,000	24,000	26,000
Total—Propellers and Parts	$76,000	$189,000	$158,000	$191,000	$130,000	$187,000
Total—U. S. Military Customers	$7,212,000	$9,249,000	$8,930,000	$12,299,000	$11,553,000	$12,835,000
Total—Other Customers	$3,350,000	$3,423,000	$3,429,000	$3,701,000	$2,311,000	$920,000
Other Products and Services	$2,555,000	$1,759,000	$2,161,000	$2,350,000	$1,841,000	$1,097,000
Total—All Products	$13,117,000	$14,431,000	$14,520,000	$18,350,000	$15,705,000	$14,852,000

Shipments of Complete Civil Aircraft and Parts

In Units and Their Value

As reported by the Bureau of the Census and C.A.A.

Month	Complete Aircraft				Value of Aircraft Parts*		Total Value Aircraft and Parts	
	1958		1957					
	Number	Value	Number	Value	1958	1957	1958	1957
January	579	$62,311,000	584	$48,431,000	$5,752,000	$4,644,000	$68,063,000	$53,075,000
February	510	65,046,000	523	49,278,000	6,203,000	7,245,000	71,249,000	56,523,000
March	697	35,133,000	675	46,636,000	4,334,000	7,278,000	39,467,000	53,914,000
April	704	47,496,000	657	57,980,000	5,063,000	7,312,000	52,559,000	65,292,000
May	622	35,113,000	672	84,136,000	4,973,000	7,373,000	40,086,000	91,509,000
June	589	25,455,000	590	69,497,000	4,810,000	6,358,000	30,265,000	75,855,000
July	501	41,037,000	525	70,649,000	5,158,000	6,795,000	46,195,000	77,444,000
August	488	35,976,000	519	62,990,000	5,687,000	6,677,000	41,662,000	69,667,000
September	399	24,401,000	466	54,911,000	4,788,000	5,454,000	29,189,000	60,365,000
October	628	49,328,000	474	45,687,000	6,133,000	7,597,000	55,461,000	53,284,000
November	531	34,881,000	516	47,213,000	5,562,000	5,614,000	40,443,000	52,827,000
December	612	37,672,000	544	44,856,000	6,621,000	6,255,000	44,293,000	51,111,000
Total	6,860	$493,849,000	6,745	$682,264,000	$65,084,000	$78,602,000	$558,933,000	$760,866,000

*—Only those parts produced in plants manufacturing complete aircraft.

Shipments of Civil Aircraft Engines and Parts

In Units and Their Value

As reported by the Bureau of the Census and C.A.A.

Month	Civil Aircraft Engines				Value of Engine Parts		Total Value Engines and Parts	
	1958		1957					
	Number	Value	Number	Value	1958	1957	1958	1957
January	1,033	$8,883,000	920	$12,445,000	$9,087,000	$11,827,000	$17,970,000	$24,272,000
February	1,139	9,696,000	902	13,596,000	8,178,000	10,295,000	17,874,000	23,891,000
March	994	8,174,000	1,010	13,975,000	9,214,000	11,607,000	17,388,000	25,582,000
April	881	8,174,000	950	14,388,000	8,893,000	11,156,000	17,067,000	25,544,000
May	828	6,176,000	1,020	15,160,000	9,664,000	10,910,000	15,840,000	26,070,000
June	783	5,995,000	933	15,636,000	9,864,000	11,444,000	15,858,000	27,080,000
July	730	4,898,000	801	12,748,000	9,693,000	11,555,000	14,591,000	24,303,000
August	693	3,420,000	776	8,603,000	6,929,000	8,102,000	10,349,000	16,705,000
September	757	3,312,000	728	10,150,000	9,653,000	9,165,000	12,965,000	19,315,000
October	811	3,336,000	921	13,638,000	13,007,000	7,999,000	16,343,000	21,637,000
November	786	2,815,000	878	9,880,000	11,727,000	8,822,000	14,542,000	18,702,000
December	798	2,965,000	1,020	12,237,000	10,818,000	10,323,000	13,783,000	22,560,000
Total	10,233	$67,843,000	10,859	$152,456,000	$116,727,000	$123,205,000	$184,570,000	$275,661,000

Civil Aircraft Shipments by Number of Places

As reported by the Bureau of the Census and C.A.A.

Year	Number of Places				Total Civil Aircraft
	Aircraft		% of Total		
	5 and Less	Over 5	5 and Less	Over 5	
1958	6,367	493	92.81	7.19	6,860
1957	5,961	784	88.38	11.62	6,745
1956	6,505	700	90.28	9.72	7,205
1955	4,372	448	90.70	9.30	4,820
1954	2,982	407	88.00	12.00	3,389
1953	3,822	312	92.45	7.55	4,134
1952	3,056	453	87.09	12.91	3,509
1951	2,275	202	91.84	8.16	2,477
1950	3,391	129	96.33	3.67	3,520

Civil Aircraft Shipments by Airframe Weights

As reported by the Bureau of the Census and C.A.A.

Year	Airframe Weights				Total Civil Aircraft
	Aircraft		% of Total		
	Under 3,000 lb.	3,000 lb and Over	Under 3,000 lb	3,000 lb and Over	
1958	6,522	338	95.07	4.93	6,860
1957	6,208	537	92.04	7.96	6,745
1956	6,778	427	94.07	5.93	7,205
1955	4,575	245	94.92	5.08	4,820
1954	3,098	291	91.41	8.59	3,389
1953	3,825	309	92.52	7.48	4,134
1952	3,057	452	87.12	12.88	3,509
1951	2,279	198	92.00	8.00	2,477
1950	3,391	129	96.33	3.67	3,520

Registered U. S. Civil Aircraft by Year of Manufacture

As reported by the Civil Aeronautics Administration

Year of Manufacture	Number of Aircraft			Per Cent of Total		
	Active	Inactive	Total	Active	Inactive	Total
1957	4.573	2	4.575	6.8	0.0	4.9
1956	5,265	662	5,927	7.8	2.5	6.4
1955	3,315	439	3,754	4.9	1.7	4.0
1954	2,188	322	2,510	3.3	1.2	2.7
1953	2,718	405	3,123	4.1	1.6	3.4
1952	2,338	314	2,652	3.5	1.2	2.8
1951	1,450	248	1,698	2.2	1.0	1.8
1950	2,241	385	2,626	3.3	1.5	2.8
1949	2,044	423	2,467	3.1	1.6	2.7
1948	3,966	964	4,930	5.9	3.7	5.3
1947	7,548	2,258	9,806	11.2	8.7	10.5
All Other	29,507	19,614	49,121	43.9	75.3	52.7
Total	67,153	26,036	93,189	100.0	100.0	100.0

Registered U. S. Civil Aircraft by Make

Ranked According to Active Aircraft

As reported by the Civil Aeronautics Administration

Manufacturer	Number of Aircraft			Per Cent of Total		
	Active	Inactive	Total	Active	Inactive	Total
Piper	16,766	5,848	22,614	25.0	22.5	24.3
Cessna	14,824	2,803	17,627	22.1	10.8	18.9
Beach	5,698	963	6,661	8.5	3.7	7.2
Convair	3,836	2,374	6,210	5.7	9.1	6.7
Champion	3,802	1,569	5,371	5.7	6.0	5.8
Silvaire	2,813	974	3,787	4.2	3.7	4.1
Taylorcraft	2,792	1,898	4,690	4.1	7.3	5.0
Forney	2,564	886	3,450	3.8	3.4	3.7
Aeronca	2,147	1,493	3,640	3.2	5.7	3.9
Boeing	2,090	1,306	3,396	3.1	5.0	3.6
Ryan	1,453	430	1,883	2.2	1.7	2.0
Douglas	1,431	211	1,642	2.1	0.8	1.7
All Other	29,507	19,614	49,121	16.3	20.3	13.1
Total	67,153	26,036	93,189	100.0	100.0	100.0

U. S. Civil Aircraft by Total Rated Take-off Hp

As of January, 1958

As reported by the Civil Aeronautics Administration

Number of Engines	Total Rated Hp. Groups	No. of Aircraft	
		Active	Total
SINGLE ENGINE	1-65	12,692	20,331
	66-100	14,019	19,175
	101-200	19,701	24,537
	201-350	11,493	14,465
	351-500	1,678	2,937
	501-700	182	254
	Over 700	93	133
	Total	59,858	81,832
TWIN-ENGINE	1-800	2,931	3,715
	801-2,000	1,184	1,320
	2,001-4,000	1,155	1,347
	Over 4000	447	479
	Total	5,717	6,861
THREE-ENGINE	1-1000	5	6
	Over 1,000	5	9
	Total	10	15
FOUR-ENGINE	1-5,000	12	15
	5,001-6,000	192	216
	6,001-10,000	429	441
	Over 10,000	390	390
	Total	1,023	1,062
Experimental and unknown		285	2,870
Balloons and dirigibles		13	40
Gliders		247	509
Total—Civil Aircraft		67,153	93,189

Registered Aircraft and Pilot Certifications

As of Dec. 31	Registered Civil Aircraft	Certified Airplane Pilots			
		Total	Airline Transport	Commercial	Private
1938	11,159	22,983	1,159	7,839	13,986
1939	13,772	33,706	1,197	11,677	20,832
1940	17,928	69,829	1,432	18,791	49,607
1941	26,013	129,947	1,587	34,578	93,782
1942	27,170	166,626	2,177	55,760	108,689
1943	27,180	173,206	2,315	63,940	106,951
1944	27,919	183,382	3,046	68,449	111,888
1945	37,789	296,895	5,815	162,873	128,207
1946	81,002	400,061	7,654	203,251	189,156
1947	94,821	433,241	7,059	181,912	244,270
1948	95,997	491,306	7,762	176,845	306,699
1949	92,622	525,174	9,025	187,769	328,380
1950	92,809	N.A.	N.A.	N.A.	N.A.
1951	88,545	580,574	10,813	197,900	371,861
1952	89,313	581,218	11,357	193,575	376,286
1953	91,102	585,974	12,757	195,363	377,854
1954	92,067	613,695	13,341	201,441	398,913
1955	85,320	643,201	13,700	211,142	418,359
1956	87,531	669,079	15,295	221,096	432,688
1957	93,189	702,519	16,900	237,149	448,470

Civil Aircraft Shipments by Total Rated Horsepower

As reported by the Bureau of the Census and C.A.A.

Year	Rated Horsepower — Aircraft		Rated Horsepower — % of Total		Total Civil Aircraft
	Under 400	400 & Over	Under 400	400 & Over	
1958	6,191	669	90.25	9.75	6,860
1957	5,811	934	86.15	13.85	6,745
1956	6,282	923	87.19	12.81	7,205
1955	4,144	676	85.97	14.03	4,820
1954	2,968	421	87.58	12.42	3,389
1953	3,822	312	92.45	7.55	4,134
1952	3,056	453	87.09	12.91	3,509
1951	2,273	204	91.76	8.24	2,477
1950	3,386	134	96.19	3.81	3,520

U. S. Civil Aircraft by Number of Places

As of January 1958

As reported by the Civil Aeronautics Administration

Number of Places	Number of Planes		
	Active	Inactive	Total
Single Engine			
1 and 2 places	33,830	17,058	50,888
3 to 5 places	24,629	5,918	30,547
Over 5 places	107	57	164
Total	58,566	23,033	81,599
Multi-Engine			
1 to 8 places	3,292	1,455	4,747
9 to 20 places	1,252	227	1,479
21 to 50 places	959	166	1,125
Over 50 places	1,277	220	1,497
Total	6,780	2,068	8,848
Experimental and Unknown	1,547	646	2,193
Gliders	247	262	509
Dirigibles	1	5	6
Balloons	12	22	34
Total—Civil Aircraft	67,153	26,036	93,189

U. S. Military Active Aircraft Inventory

As Reported by the Aircraft Industries Association

As of June 30	Dept. of Air Force Active Aircraft		Dept. of Army Active Aircraft			Dept. of Navy Active Aircraft	
	On Hand	Operating	On Hand	Helicopters	Fixed-Wing	On Hand	Operating
1955	23,694	21,398	3,539	1,188	2,351	12,821	9,761
1956	26,760	21,564	3,573	1,456	2,117	12,317	9,687
1957	25,969	20,902	4,447	1,901	2,546	11,617	9,421
1958	22,057	20,330	4,937	2,140	2,797	10,654	8,733
1959	20,843	19,142	5,439	2,443	2,996	9,826	8,054

U. S. Civil Aircraft Registrations by States

As of January of Each Year

As reported by the Civil Aeronautics Administration

State	1958		1957		1956	
	Total	Active	Total	Active	Total	Active
Alabama	821	597	738	521	668	468
Alaska	1,697	1,090	1,494	970	1,362	950
Arizona	1,346	838	1,207	825	1,174	780
Arkansas	1,173	812	1,070	756	1,018	680
California	11,744	7,970	10,587	7,420	9,926	6,766
Colorado	1,283	942	1,169	907	1,168	852
Connecticut	740	524	693	500	664	469
Delaware	297	219	259	189	224	156
Dist. of Col.	493	331	473	340	446	331
Florida	3,295	2,079	2,688	1,787	2,458	1,442
Georgia	1,276	901	1,162	834	1,121	766
Idaho	850	639	824	646	802	631
Illinois	4,999	3,782	4,788	3,669	4,741	3,487
Indiana	2,563	1,933	2,481	1,953	2,538	1,834
Iowa	1,921	1,621	1,921	1,654	1,966	1,629
Kansas	2,308	1,715	2,407	1,866	2,200	1,641
Kentucky	644	478	608	459	641	455
Louisiana	1,543	4,021	1,459	1,056	1,326	863
Maine	465	330	458	356	434	314
Maryland	871	609	804	576	799	551
Massachusetts	1,340	947	1,299	922	1,295	877
Michigan	3,757	2,812	3,626	2,710	3,611	2,625
Minnesota	2,522	1,994	2,275	1,827	2,220	1,675
Mississippi	957	636	890	634	867	559
Missouri	2,167	1,646	2,063	1,567	1,965	1,498
Montana	1,196	927	1,154	917	1,123	868
Nebraska	1,414	1,111	1,436	1,144	1,565	1,231
Nevada	458	320	417	287	444	307
New Hampshire	243	170	211	151	203	135
New Jersey	1,920	1,269	1,835	1,290	1,789	1,199
New Mexico	854	630	780	548	780	534
New York	4,486	3,240	4,194	3,059	4,255	2,969
North Carolina	1,635	1,170	1,533	1,126	1,526	1,055
North Dakota	948	685	923	612	974	625
Ohio	4,293	3,106	4,123	3,054	4,115	2,904
Oklahoma	1,923	1,402	1,884	1,467	1,812	1,311
Oregon	1,689	1,256	1,682	1,286	1,619	1,176
Pennsylvania	3,328	2,429	3,307	2,434	3,388	2,413
Rhode Island	189	146	173	125	184	133
South Carolina	540	390	520	372	509	361
South Dakota	964	715	979	749	992	769
Tennessee	1,018	721	922	665	845	585
Texas	7,555	5,552	7,011	5,268	6,617	4,703
Utah	562	388	512	365	484	355
Vermont	163	108	158	112	149	90
Virginia	1,207	868	1,142	830	1,075	687
Washington	2,361	1,722	2,199	1,638	2,219	1,587
West Virginia	505	385	491	356	507	336
Wisconsin	1,812	1,410	1,711	1,338	1,689	1,255
Wyoming	486	367	461	365	477	360
Continental U. S.	92,821	66,953	87,201	64,502	84,974	60,247
Hawaii	187	113	171	99	175	92
Other	181	87	159	87	171	93
Grand Total	6,412	3,195	3,217		1,054	442

U. S. Civil Aircraft in Scheduled Air Transportation

Airlines and Their Registered Aircraft

As reported by the Civil Aeronautics Administration

Airline	No. of Aircraft
Aaxico	18
Aerovias Sud Americana	5
Alaska Airlines	10
Alaska Coastal Airlines	9
Allegheny Airlines	22
American Airlines	225
Bonanza Air Lines	10
Braniff Airways	73
Capital Airlines	101
Caribbean Atlantic	4
Central Airlines	13
Chicago Helicopter Awys.	10
Continental Air Lines	28
Cordova Airlines	3
Delta Air Lines	78
Eastern Air Lines	164
Ellis Air Lines	9
Flying Tiger Line	21
Frontier Airlines	15
Hawaiian Airlines	14
Lake Central Airlines	10
Los Angeles Airways	7
Mackey Airlines	5
Mohawk Airlines	22
National Airlines	51
New York Airways	9
North Central Airlines	27
Northeast Airlines	27
Northern Consolidated	4
Northwest Airlines	54
Ozark Airlines	20
Pacific Airlines	22
Pacific Northern	9
Pacific Southwest	4
Pan American-Grace	21
Pan American World	140
Piedmont Aviation	21
Reeve Aleutian	5
Resort Airlines	2
Riddle Airlines	32
Seaboard and Western	15
Slick Airways	22
Southern Airways	13
Trans-Pacific Airlines	8
Trans-Texas Airways	20
Trans World Airlines	184
United Airlines	197
West Coast Airlines	14
Western Air Lines	35
Wien Alaska	9
Total	1,841

U. S. Civil and Military Airports by Type*

As of April, 1958

As reported by the Civil Aeronautics Administration

State	Total	Public	Limited	Paved Airports	
				Lighted	Not Lighted
Alabama	62	39	23	15	15
Alaska	281	161	120	19	1
Arizona	151	57	94	13	22
Arkansas	79	50	29	18	5
California	369	224	145	96	70
Colorado	95	47	48	16	1
Connecticut	28	19	9	8	1
Delaware	19	11	8	2	2
Dist. of Col.	1	1	0	1	0
Florida	137	101	36	40	29
Georgia	95	63	32	26	15
Idaho	164	54	110	11	4
Illinois	269	105	164	38	7
Indiana	124	93	31	19	8
Iowa	158	72	86	16	0
Kansas	191	107	84	28	12
Kentucky	48	22	26	10	5
Louisiana	75	40	35	17	6
Maine	110	34	76	13	10
Maryland	47	26	21	7	7
Massachusetts	87	46	41	19	7
Michigan	194	114	80	40	2
Minnesota	199	76	123	28	0
Mississippi	74	47	27	22	4
Missouri	114	74	40	24	10
Montana	151	62	89	17	5
Nebraska	171	80	91	22	6
Nevada	57	27	30	15	5
New Hampshire	32	13	19	7	2
New Jersey	104	52	52	10	3
New Mexico	100	41	59	20	12
New York	266	96	170	33	9
North Carolina	101	59	42	18	7
North Dakota	165	44	121	9	0
Ohio	271	114	157	28	10
Oklahoma	117	77	40	29	13
Oregon	116	49	67	24	14
Pennsylvania	278	132	146	28	14
Rhode Island	9	6	3	4	1
South Carolina	61	32	29	11	7
South Dakota	70	50	20	10	1
Tennessee	48	37	11	11	4
Texas	477	210	267	92	42
Utah	53	40	13	10	12
Vermont	23	13	10	5	0
Virginia	100	45	55	15	9
Washington	179	74	105	28	9
West Virginia	50	24	26	10	2
Wisconsin	150	84	66	20	3
Wyoming	59	26	33	13	0
Continental U. S.	6,379	3,170	3,209	1,035	433
Hawaii and Pacific	22	16	6	12	6
Other	11	9	2	7	3
Grand Total	6,412	3,195	3,217	1,054	442

*—Definitions of airports are as follows: Public-use—all airports that serve scheduled and large irregular air carriers as regular, alternate and provisional stops; all C.A.A. intermediate landing fields; all airports having a true-light certificate to indicate a lighted airport, and all other airports which are operationally active. Limited-use—all airports that do not qualify as "Public-Use" airports.

Scheduled Air Carrier Operation Statistics

As reported by the Civil Aeronautics Board

Number of Operators, Aircraft in Service, Route Mileage and Speed

	DOMESTIC LINES					INTERNATIONAL LINES				
Year	Operators	Aircraft in Service	Average Number of Seats	Route Mileage Operated	Average Speed (mph)	Operators	Aircraft in Service	Route Mileage Operated	Average Length of Pass. Trip	Average Speed (mph)
1942......	19	186	17.91	41,596	N.A.	3	68	N.A.	880	N.A.
1943......	19	204	18.34	42,537	N.A.	3	70	27,211	874	N.A.
1944......	19	288	19.05	47,384	155.6	3	70	29,708	910	149.2
1945......	20	421	19.68	48,516	155.4	4	97	38,885	942	150.7
1946......	24	674	25.25	53,981	160.2	9	147	66,419	1,057	166.3
1947......	28	810	29.93	62,215	168.2	12	154	95,503	1,332	191.1
1948......	31	878	32.37	68,702	171.9	13	175	105,853	1,376	198.5
1949......	37	913	35.03	72,667	179.0	13	177	109,011	1,351	207.1
1950......	38	960	37.47	77,440	181.2	12	160	106,401	1,316	218.4
1951......	38	981	39.55	78,913	184.6	12	140	108,763	1,278	223.5
1952......	35	1,078	42.71	77,894	190.8	13	149	110,465	1,277	226.8
1953......	32	1,139	46.07	78,384	197.8	14	161	111,826	1,254	229.9
1954......	32	1,175	50.06	78,294	205.8	15	161	112,488	1,314	242.1
1955......	31	1,212	51.62	78,992	209.0	15	147	114,005	1,294	245.4
1956......	30	1,347	52.43	84,189	212.6	13	196	113,694	1,298	249.1
1957......	30	1,494	54.02	88,248	216.1	14	170	132,393	1,305	254.6

Scheduled Air Carrier Operating Revenues—Domestic Lines

		Passenger		Mail		Express & Freight		Excess Baggage		Other	
Year	Total Revenues	Dollars	% of Total	Dollars	% of Total	Dollars	% of Total	Dollars	% of Total	Dollars	% of Total
1942...	108,248,830	74,819,050	69.1	23,470,088	21.7	6,977,943	6.4	1,259,774	1.2	1,721,975	1.6
1943...	123,104,965	87,481,456	71.0	24,212,580	19.7	8,381,539	6.8	1,720,142	1.4	1,309,248	1.1
1944...	160,928,192	116,440,690	72.3	33,317,366	20.7	8,306,288	5.2	2,030,444	1.3	833,404	0.5
1945...	214,743,090	166,519,922	77.5	33,693,467	15.7	10,835,138	5.0	2,298,241	1.1	1,396,322	0.7
1946...	316,232,793	275,598,712	87.2	20,981,542	6.6	13,620,295	4.3	2,992,795	0.9	3,044,449	1.0
1947...	364,839,575	308,575,954	84.6	29,444,746	8.1	19,377,949	5.3	3,572,104	1.0	3,868,822	1.0
1948...	434,295,383	343,289,730	79.0	59,309,343	13.7	24,372,395	5.6	3,953,310	0.9	3,370,605	0.8
1949...	486,033,845	388,930,412	80.0	59,332,991	12.2	27,986,886	5.8	4,452,334	0.9	5,331,220	1.1
1950...	557,162,340	443,852,000	79.7	63,772,233	11.4	35,169,399	6.3	5,068,238	0.9	9,360,461	1.1
1951...	702,364,506	591,186,365	84.2	57,421,687	8.2	36,914,107	5.2	6,069,313	0.9	10,773,018	1.5
1952...	817,680,000	695,456,000	85.1	58,887,000	7.2	42,828,000	5.2	7,348,000	0.9	13,152,000	1.6
1953...	937,482,000	803,869,000	85.8	64,484,000	6.9	47,791,000	5.1	8,704,000	0.9	12,622,000	1.3
1954...	1,042,793,000	905,840,000	86.9	65,726,000	6.3	49,901,000	4.8	10,632,000	1.0	10,680,000	1.0
1955...	1,201,266,000	1,060,590,000	88.3	55,536,000	4.6	61,102,000	5.1	12,168,000	1.0	11,856,000	1.0
1956...	1,341,732,000	1,188,842,000	88.6	61,922,000	4.6	62,722,000	4.7	14,991,000	1.1	13,240,000	1.0
1957...	1,515,145,000	1,342,579,000	88.6	69,676,000	4.6	67,228,000	4.5	18,454,000	1.2	17,189,000	1.1

Personnel Employed—Domestic Scheduled Air Carriers

	Pilots and Copilots	Other Flight Personnel	Pursers, Stewards, Stewardesses	Meteorologists and Dispatchers	Mechanics	Hangar and Field Personnel	Office Employees	All Other Personnel	Total Employees
1942...............	2,194	112	753	1,581	9,348	2,969	7,717	2,236	26,910
1943...............	2,125	8	845	1,685	8,271	3,356	10,973	2,391	29,654
1944...............	2,879	11	1,322	1,870	7,136	3,509	12,201	2,270	31,198
1945...............	4,967	108	2,075	2,613	10,844	7,012	19,241	3,453	50,313
1946...............	5,712	98	3,342	3,577	16,107	10,307	24,626	5,413	69,182
1947...............	5,034	181	3,061	2,618	15,366	8,409	22,012	2,317	58,998
1948...............	5,307	312	3,038	2,612	16,428	9,222	21,396	2,101	60,416
1949...............	5,257	642	3,199	2,497	15,674	9,336	21,136	2,145	59,886
1950...............	5,785	776	3,372	2,450	15,788	9,822	21,894	2,016	61,903
1951...............	6,688	1,012	4,106	2,617	18,908	11,475	25,770	2,322	72,898
1952...............	7,209	1,141	4,640	2,666	20,973	12,388	27,939	2,731	79,687
1953...............	7,726	1,365	4,954	2,665	20,717	14,249	30,193	2,782	84,651
1954...............	7,803	1,624	5,141	2,419	20,108	14,575	30,436	2,659	84,765
1955...............	8,721	1,721	5,919	2,548	23,776	15,872	34,148	2,843	95,468
1956...............	9,143	2,241	6,514	2,614	25,789	17,317	36,841	3,020	103,489
1957...............	11,430	3,135	7,939	3,037	26,153	29,406	25,425	12,808	119,333

Personnel, Payroll and Average Salary—1957

	DOMESTIC LINES			INTERNATIONAL LINES		
Type of Employee	Personnel	Annual Payroll	Avg. Annual Salary	Personnel	Annual Payroll	Avg. Annual Salary
Pilots and Copilots	11,430	$138,663,643	$12,131.55	1,856	$25,761,202	$13,879.96
Other Flight Personnel	3,135	27,914,092	8,904.02	662	6,970,789	10,529.89
Stewards, Stewardesses, Pursers	7,939	27,703,067	3,489.49	1,511	6,706,279	4,438.31
Communications Personnel	3,037	13,732,251	4,521.65	967	2,732,210	2,825.45
Mechanics	26,153	142,083,041	5,432.76	5,009	25,627,034	5,116.20
Other Hangar and Field Personnel	29,406	140,701,946	4,784.80	6,646	24,486,463	3,684.39
Office Employees	25,425	122,158,498	4,804.66	6,374	25,221,484	3,956.93
All Other Employees	12,807	74,675.988	5,830.65	4,832	22,025,484	4,558.25
Total	119,332	$687,632,526	$5,762.32	27,857	$139,530,915	$5,008.83

AIRCRAFT GAS TURBINES ... 1959

Line Number	Make and Model	Engine Type: Turbo-jet or Prop.	Engine Type: Single or Coupled	Performance, Take-Off: Thrust (Lb.)	Take-Off: Prop. Shaft (Hp.)	Take-Off: RPM	Take-Off: Fuel Consumption	Normal: Thrust (Lb.)	Normal: Prop. Shaft (Hp.)	Normal: RPM	Normal: Fuel Consumption	Max. Cruising: Thrust (Lb.)	Max. Cruising: Prop. Shaft (Hp.)	Max. Cruising: RPM	Max. Cruising: Fuel Consumption	Propeller Gearing Type	Compressor: Type	Compressor: No. of Stages	Compressor: Pressure Comp. Ratio	Compressor: Blade Roots	Turbine: No. of Stages	Turbine: Blade Roots
	UNITED STATES																					
1	Allison J-33-A-18-A	TJ	S	5100	N	12130	1.17[1]	3900	N	11250	1.12[1]		N			N	Ce	Du	4.35	In		
2	J-33-A-41	TJ	S	5200	N	12150	1.17[1]		N			4275	N	11500	1.14[1]	N	Ce	Du	4.35	In		
3	J-71-A-2	TJ	S	10000	N				N				N			N	A					
4	T-56-A-1	TP	S	726	3460	13820	.54[9]	702	3094	13820	.55[9]	702	3094	13820	.55[9]	P	A	14	9.25	Do	4	FT
5	501-D-13	TP	S	726	3460	13820	.54[9]	702	3094	13820	.56[9]	145	1820	13820	.46[9]	P	A	14	9.46	Do	4	FT
6	T-56-A-7	TP	S	740	3755	13820	.53[9]	718	3443	13820	.54[9]	718	3443	13820	.54[9]	P	A	14	9.64	Do	4	FT
7	T-56-A-8	TP	S	740	3755	13820	.53[9]	718	3443	13820	.54[9]	718	3443	13820	.54[9]	P	A	14	9.64	Do	4	FT
8	T-56-A-9	TP	S	726	3460	13820	.54[9]	702	3094	13820	.55[9]	702	3094	13820	.55[9]	P	A	14	9.25	Do	4	FT
9	T-56-A-10W	TP	S	750	4200[10]	13820		718	3443	13820	.54[9]	718	3443	13820	.54[9]	P	A	14	9.64	Do	4	FT
10	Boeing 500-10	TJ		248	N		1.12[1]	235	N		1.12[1]		N			N	Ce	1	4.25	In	1	W
11	502-10C	TP	S		270	3200	1.00		240	3200	1.06					P	Ce	1	4.25	In	2	W
12	502-10-F	TP	S		300	3200	1.00		300	3200	.95					P	Ce	1	4.47	In	2	W
13	502-11B	AS	S				1.00		205[4]	3200	1.00						Ce	1	4.25	In	2	W
14	520-2	TP	S		350	6200	.72		350	6000	.76					P	Ce	1	7.00	In	2	W
15	Continental XT-51-T-3 (Art II)	TP	S		425	34800	.98[2]									SpG	Ce	1	3.95	In	2	In
16	J-69-T-9	TJ		920	N	22700	1.13[1]	725	N	21000	1.06[1]					N	Ce	1	4.00	In	1	FT
17	J-69-T-19-B	TJ		1060	N	21700	1.27	860	N	20500	1.25		N			N	Ce	1	3.80	In	1	FT
18	141	Ac			191[4]	34500	2.87[3]										Ce,	1	4.00	In	2	In
19	215 (Artouste III)	TP			590	6000	.74[1]		490								Ce	1	5.70	In	3	In
20	320 (Palas)	TJ		350	N	34000	1.18[1]	290	N	31500	1.10		N			N	Ce	1	3.90	In	1	In
21	324 (Arbizon)	TJ		550	N	34500	1.12[1]	435	N	32500	1.08[1]		N			N	Ce	2	5.00	In	2	In
22	J-69-T-25	TJ		1025	N	21730	1.14[1]	880	N	20700	1.12[1]		N			N	Ce	1	3.80			FT
23	J-69-T-29	TJ		1700	N	22000	1.10[1]	1375	N	20790	1.09[1]		N			N	C-A	2	5.50			FT
24	Fairchild J-44-R-3	TJ	S	1000	N	15780	1.55[1]	900	N	15100	1.60[1]		N			N	MF	1	2.70	In	1	W
25	J-44-R-20-B	TJ	S	1000	N	15780	1.55[1]	1080	N	15780	1.55[1]		N			N	MF	1	2.70	In	1	W
26	J-44-R-26	TJ		1100	N	16570	1.35[1]	1100	N	16570	1.35[1]		N			N	MF	1	3.40	In		
27	J-83-R-3	TJ	S	2000[5]	N				N				N			N						
28	General Electric J79	TJ		15000	N			15000	N			15000	N			N	A	17	12.00	FT		
29	J93	TJ			N				N				N			N						
30	CJ-805	TJ		10000	N			10000	N			10000	N			N	A	17	13.00	FT		
31	Lycoming LTC1B-2	ST		102	860[11]	6680	.73	96	770	6610	.76					P	AC	6	6.00	FT	2	FT
32	LTC1F-1	TP		113	960	1700	.65	100	825	1700	.67					P	AC	6	6.00	FT	2	FT
33	LTC1K-1	ST		113	960[11]	6610	.66	100	825	6610	.68					P	AC	6	6.00	FT	2	FT
34	LTC4A-1	TP		190	1600	1320	.64	168	1325	1230	.68					P	AC	8	6.30	FT	3	FT
35	LTC4B-2	ST		211	1850[11]	6720	.64	194	1650	6380	.66					P	AC	8	6.30	FT	3	FT
36	Pratt & Whitney JT3C-2	TJ	S	13750	N		.95[1]	9500	N		.77[1]	8550	N		.77[1]	N	A	16	13.00	FT		
37	JT3C-6	TJ	S	13000	N		.90[1]	9500	N		.77[1]	8100	N		.77[1]	N	A	16	13.00	FT		
38	JT3C-7	TJ	S	12000	N		.79[1]	10000	N		.77[1]	8500	N		.77[1]	N	A	16	13.00	FT		
39	JT3C-21	TJ	S	16900	N		2.30[1]	9150	N		.82[1]	8250	N		.82[1]	N	A	16	13.00	FT		
40	JT3D-1	TuF	S	16000	N		.61[1]	13000	N		.60[1]	11500	N		.59[1]	N	A	15		FT		
41	JT7H	TJ	S	7250	N		1.14[1]	5600	N		1.12[1]	3750	N		1.14[1]	N	Ce	1	4.00	In		
42	JT12A-1	TJ	S	2900	N		.93[1]	2400	N		.90[1]	2160	N		.89[1]	N	A	9		FT		
43	JT12A-3	TJ	S	2900	N		.93[1]	2400	N		.90[1]	2140	N		.89[1]	N	A	9		FT		
44	JT12A-20	TJ	S	3900	N		2.30[1]	2350	N		.93[1]	2110	N		.92[1]	N	A	9		FT		
45	PT2G-4	TP	S	1250	5500	1000	.63[1]	1125	4750	977	.66[1]	1000	3800	955	.70[1]	P	A	13	6.70	FT		
46	PT2G-6	TP	S	1375	6950	1000	.55[1]	1250	5150	977	.63[1]	1125	4120	955	.67[1]	P	A	13	6.70	FT		
47	Westinghouse J-34-WE-36	TJ		3400	N				N				N			N	A			Ba		
48	J-34-WE-46	TJ		3400	N				N				N			N	A			Ba		
49	J-54-WE-2	TJ		6000	N				N				N			N	A					
50	XJ-81	TJ		1740	N				N				N			N	A					
51	Wright J65-W-5	TJ	S	7220	N	8300	.92[1]	6400	N	8000			N			N	A	13		FT	2	FT
52	J65-W-7	TJ	S	7800	N	8300	.91[1]	6870	N	8000	.88[1]		N			N	A	13		FT		
53	J65-W-16	TJ	S	7700	N	8300	.92[1]	6780	N	8030	.90[1]		N			N	A	13		FT		
54	J65-W-18	TJ	S	10500	N		2.20[1]	6470	N	8030	.92[1]		N			N	A	13		FT		
	CANADA																					
55	Iroquois	TJ		20000[5]	N				N				N			N	A					
	FRANCE																					
56	Dassault MD-30	TJ		1643	N	13400	1.09		N			1400	N	12700	1.09	N	A	7	3.5	Do	1	FT
57	MD-30-R	TJ		2204	N	13400	2.40		N				N			N	A					
58	R-7	TJ		3700	N	11800	1.09		N			2650	N	11200	1.09	N	A	7	4.0	Ta	1	FT
59	Hispano-Suiza HS-Nene 105	TJ		5100	N	12500	1.00	4620	N	12200		4050	N	11800		N	Ce		4.40	FT	1	
60	HS-Tay 250	TJ		6280	N	11000	1.06[1]		N				N			N	Ce		4.25	FT	1	
61	HS-Verdon 350	TJ		7700	N	11100	1.10[1]	6834	N	10800		6172	N	10500		N	Ce		4.95	FT	1	
62	HS-R-800	TJ		2645	N				N				N			N	A			FT	1	
63	HS-R-804	TJ		3306	N	12000	1.08[1]	7000	N		1.07[1]	2645	N	11250		N	A	7		FT	1	
64	S. N. E. C. M. A. Atar E-5	TJ		7725	N	8400	1.05	2970	N	8225	1.02	6175	N	8050	1.01	N	A	8	4.80		1	
65	Atar G-2, G-3	TJ		9700	N	8400	2.05	8600	N	8400	1.60	5950	N	8050	1.07	N	A	8	4.80		1	
66	Atar 8	TJ		9700	N	8400	.98	8820	N	8300	.95	7775	N	8150	.93	N	A	9	5.20		2	
67	Atar 9	TJ		13250	N	8400	2.07	11900	N	8400	1.69	7500	N	8150	.97	N	A	9	5.20		2	
68	Turbomeca Palas	TJ		352	N	34000	1.17[1]	285	N		1.13[1]		N			N	Ce	1	3.95		1	
69	Arbizon	TJ		552	N	34000	.90	440	N		.91[1]		N			N			5.50		2	
70	Marbore II	TJ		880	N	22600	1.15[1]	710	N		1.09[1]	120	N			N	Ce	1	3.85		1	
71	Gourdon	TJ		1545	N	21500	1.00	1270	N		.99[1]	1140	N		.99[1]	N			5.00		2	
72	Gabizo	TJ		2400	N	17500	1.04	2000	N		1.00[1]		N			N			5.20		1	
73	Artouste II	ST			396	33000	1.07		320		1.10[2]						Ce	1	3.60		2	
74	Artouste III	ST			594	34000	.65		500		.72[2]								5.50		3	
75	Turmo II	FrT			369	34000	1.07		320	34500	1.08[2]						Ce		3.90		2	
76	Turmo III	FrT			786	34500	.72		600		.86[2]								5.50		3	
77	Palouste IV	Ac				34000	2.60[3]				2.43[3]						Ce	1	3.80		2	
78	Autan II	Ac				34500	3.50[3]				3.15[3]								5.10		3	
79	Tramontane	Ac																				
80	Bastan	TP		174	741	33000	.67	168	600		.74[2]								5.20		3	
81	Artouste III	TP			550	1840	.68[2]	120	500		.71[2]											
82	Marcadau	TP		71	396	33000	1.07	66	320		1.12[2]						Ce	1	3.60		2	
83	Astazou	TP		45	400	44000	.68	45	300		.66[2]								5.00		3	
84	Marbore IV	TJ		1000	N	20500	1.20										Ce	1	3.50		1	

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Combustion Chambers				Fuel System						Ignition System		Lubrication		Make of Component Parts					Overall Dimensions: Length (In.)			Dry Weight		
Arrangement	No. Used	Material	Air Intake	No. of Pumps	No. of Emergency Pumps	Fuel Controls	Afterburning	Recommended Octane Rating of Fuel	No. Fuel Nozzles per Combustion Chamber	No. of Ignitors	Type of Ignitor	Sump Capacity (Pts.)	Max. Oil Consumption (Pts. Hr.)	Starter	Generator	Governor	Vacuum Pump	Fuel Pumps	With Extension Pipe	Without Extension Pipe	Max. Diameter (In.)	With Component Parts (Lb.)	Without Component Parts (Lb.)	Line Number
UNITED STATES																								
				1	N	M	N		1	2	Sp	24.0	1.2	Gov	Gov			Pes		94.0	49.0	1790.		1
Cy				1	N	M	N	JP-4	1	1	Sp	24.0	2.0	Gov	Gov			Pes	156.2		48.9	1796		2
							Y												284.6		42.0	4869		3
Cn	8	SS	TF	2	1	HM	N	JP-4	1	2	Sp	Dry	3.6	Gov	Gov	Gov	Gov	Pes		145.2	40.3	1675		4
Cn	8	SS	TF	2	1	HM	N	AK	1	2	Sp	Dry	3.4	FA	FA	FP		Pes		145.2	42.5	1756		5
Cn	8	SS	TF	2	1	HM	N	JP-4	1	2	Sp	Dry	2.8	Gov	Gov	Gov	Gov	Pes		146.2	42.0	1848		6
Cn	8	SS	TF	2	1	HM	N	JP-5	1	2	Sp	Dry	2.8	Gov	Gov	Gov	Gov	Pes		146.2	42.0	1852		7
Cn	8	SS	TF	2	1	HM	N	JP-4	1	2	Sp	Dry	3.6	Gov	Gov	Gov	Gov	Pes		146.2	42.0	1679		8
Cn	8	SS	TF	2	1	HM	N	JP-4,JP-5	1	2	Sp	Dry	2.8	Gov	Gov	Gov	Gov	Pes		146.2	42.5	1845		9
Cy	2		TF	1		M	N	De,JP-4	1	2	SG	12.0	Ne	Var	Var	Var		Var	34.0	24.0		210	210	10
Cy	2	SS	TF	1		M	N	G,De,K,JP-4	1	2	SG	12.0	Ne	Var	Var	Var		Var	41.5		24.3	330	330	11
Cy	2	SS	TF	1		M	N	G,De,K,JP-4		2	SG	12.0	Ne	Var	Var	Var		Var	41.5	41.5	24.3	300	300	12
Cy	2	SS	TF	1		M	N	G,De,K,JP-4	1	2	SG	12.0	Ne	Var	Var	Var		Var	50.0		28.5	375	375	13
Cy	2	SS	RF	1		M	N	G,De,K,JP-4		2	SG	12.0	Ne	Var	Var	Var		Var	42.0	42.0	24.0	380	380	14
An	1	NS		1		M	N	G,K,JP-4		2	Sp		.5							44.3	23.2	250	236	15
An	1			1		M	N	G,K,JP-4		2	Sp		.2	Br	Br					50.5	27.0	364	333	16
An	1			1		M	N	JP-4		2	Sp		.5	Br	Br	Own		Own		43.3	22.3	349	312	17
An	1			1	N	Pn	N	JP-3,JP-4		2	Sp		.5[3]							44.3		247	197	18
An	1			1		M	N			2	Sp		.5[3]							54.4	21.4	320	285	19
An	1	NS		1		M	N	G,K,JP-4		2	Sp		.5						41.6		16.0		137	20
An	1					M	N			2	Sp		.8[3]							48.6	15.9	214		21
An	1			1	N	HM	N	JP-4	1	2	Sp		.5[3]	FA	FA	Ben	FA	Ben	Var	49.9	22.3	364		22
An	1			1	N	HP	N		1	2	Sp		1.0[3]						Var	44.8	22.3	335		23
An	1	SS	DF	1	N	E,M,H	N	G	12	2	Sp	N	Ne	JH	N	Ww	N	Pes		90.4	24.3	416	370	24
An	1	SS	DF	1	N	E,M,H	N	G,JP	12	1	Sp	N	Ne	Br	Br	Ww	N	Pes	88.4	75.4	22.0	392	339	25
An	1	SS	DF	1	N	E,M,H	N	G,JP	12	1	Sp		Ne	Br	Br	Ww		Pes	91.7		22.0	422	365	26
																								27
Cn						HM	Y												204.0		36.0	3200		28
																								29
Cn	10	SA	DF	1	N	HM	N	JP-4	1	2	Sp	38.0	2.0	AR	GE	Ww	LR	Pes	127.0	109.6	36.6	2780		30
An	1	SS	RF	1	(6)	HM	N	JP-4	11	2	Sp		1.1					CE		47.6	23.0	480		31
An	1	SS	RF	1	(6)	HM	N	JP-4	11	2	Sp		1.1					CE		58.8	23.0	495		32
An	1	SS	RF	1	(6)	HM	N	JP-4	11	2	Sp		1.1					CE		47.6	23.0	480		33
An	1	SS	RF	1	(6)	HM	N	JP-4	14	2	Sp		2.0					HS		58.8	24.2	695		34
An	1	SS	RF	1	(6)	HM	N	JP-4	14	2	Sp		2.0					HS		44.0	24.2	600		35
Cn	8		DF	1		HM	N	JP-4	6	2	Sp		2.0					Cc		167.3	38.6		3840	36
Cn	8		DF	1		HM	N	JP-4,JP-5	6	2	Sp		3.2					Cc			38.9		4324	37
Cn	8		DF	1		HM	N	JP-4,JP-5	6	2	Sp		3.2					Cc			38.9		3495	38
Cn	8		DF	1	1	HM	Y	JP-4	6	2	Sp		2.7					P-T		250.8	39.6		4750	39
Cn	8		DF	1		HM	N	JP-4,JP-5	6	2	Sp		3.2								53.0		4025	40
	9		DF	3	3	HM	N	JP-4	2	2	Sp							B-C		109.8	50.5		2080	41
Cn	8		DF	1		HM	N	JP-4,JP-5	1	2	Sp		2.0					Th		76.0	21.9		430	42
Cn	8		DF	1		HM	N	JP-4,JP-5	1	2	Sp		2.0					Th		76.0	21.9		430	43
Cn	8		DF	1		HM	Y	JP-4	1	2	Sp		2.0					Th		126.0	21.9		645	44
Cn	8		DF	1	1	HM	N	JP-4	1	2	Sp		5.0					Pes		156.8	33.8		2670	45
Cn	8		DF	1	1	HM	N	JP-4	1	2	Sp		5.0					Pes		155.1	34.1		2870	46
An			DF					JP-3		2	Sp		.7[3]							112.0	27.0	1200		47
An			DF					JP-4,JP-5												112.0	27.0	1242		48
An			DF					JP-4												123.0	28.0			49
An			DF					JP-4												69.9	15.8	304		50
An	1	SS	DF	2	N				36	2				Gov	Gov	Th		Th	138.8		37.5	2696	2500	51
An	1	SS	DF	2	N	M	N		36	2	Sp			Gov	Gov			Th		114.8	37.5	2795		52
An	1	SS	DF	2	N	M	N		36	2	Sp			Gov	Gov			Th		121.9	37.5	2742		53
An	1	SS	DF	3	N	M	Y		36	2	Sp			Gov	Gov			Cc	181.1		37.5	3485		54
CANADA																								
An							Y							AR		Luc		Luc	228.0	153.0	42.0			55
FRANCE																								
An	1			1		Luc		DERD2482	24	2	HE		1.5[3]			Luc		Luc		65.8	24.3	578		56
				2			Y													126.0		694		57
An	1			1						2	HE			AE		AE		AE		78.8	27.2	750		58
Cy	9			2		H	N		1	2	HE									96.0	49.5	1606		59
Cy	9			2		H	N		1	2	HE									100.0	50.0	1973		60
Cy	9		DF	2		H	N		1	2	HE									103.2	50.0	2057		61
																								62
An	7			1		M	Y			2	HE									78.8	27.7	678		63
An	20		DF	1		H	N			2	SG	17½	1.9	Own		B-S		B-S	162.0	92.5	39.0	1850		64
An	20		DF	1	1	H	Y			2	SG	17½	1.9	Own		B-S		B-S	253.0		40.0	2720		65
An	20			1		H	N			2	SG	11½	1.3	Own		B-S		B-S	181.0	112.0	40.0	2180		66
An	20		DF	1	1	H	Y			2	SG	11½	1.3	Own		B-S		B-S	264.0		42.0	2900		67
An										2	To									47.0	16.0	158		68
An										2	To									57.0	21.0	236		69
An										2	To								62.0		25.0	314		70
An										2	To								75.0		24.0	386		71
An							Y			2	HE								82.0		21.0	585		72
An										2	To								67.0		23.0	288		73
An										2	To								58.0		21.0	318		74
An										2	To								49.0		26.0	320		75
An										2	To								66.0		31.0	530		76
An										2	To								53.0		22.0	200		77
An										2	To								54.0		21.0	250		78
										2	To									46.8	22.8	370		79
An										2	To								61.0		21.0		396	80
										2	To								69.0		21.6	575		81
An										2	To								57.0		22.0	350		82
An										2	To								70.0		18.0	286		83
An																			62.0		25.0	300		84

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AIRCRAFT GAS

Line Number	MAKE AND MODEL	ENGINE TYPE: Turbo-jet or Prop.	ENGINE TYPE: Single or Coupled	TAKE-OFF: Thrust (Lb.)	TAKE-OFF: Prop. Shaft (Hp.)	TAKE-OFF: RPM	TAKE-OFF: Fuel Consumption	NORMAL: Thrust (Lb.)	NORMAL: Prop. Shaft (Hp.)	NORMAL: RPM	NORMAL: Fuel Consumption	MAX. CRUISING: Thrust (Lb.)	MAX. CRUISING: Prop. Shaft (Hp.)	MAX. CRUISING: RPM	MAX. CRUISING: Fuel Consumption	Propeller Gearing Type	COMPRESSOR: Type	COMPRESSOR: No. of Stages	COMPRESSOR: Pressure Comp. Ratio	COMPRESSOR: Blade Roots	TURBINE: No. of Stages	TURBINE: Blade Roots
	GREAT BRITAIN																					
	Armstrong-Siddeley																					
1	Double Mamba ASMD-3	TP	C	900	2800	15000	.72					807	2380	15000	.75	EP	A	10	5.36	FT	3	FT
2	Mamba 6	TP	S	320	1650	15000	.72	280	1150	14000	.73	300	1380	15000	.74	EP	A	11	5.84	FT	3	FT
3	Double Mamba 8	TP	C	710	3600	15000	.67									EP	A	11	5.90	FT	3	FT
4	Sapphire ASSa-6	TJ	S	8300	N	8600	.90		N			7170	N	8200	.85	N	A	13		Do	2	FT
5	Sapphire ASSa-7	TJ	S	11000	N	8600	.89		N			9740	N	8200	.84	N	A	13		FT	2	FT
6	Viper ASV-8	TJ		1750	N	13800	1.07	1625	N	13500	1.07	1475	N	13100	1.08	N	A	7	4.13	CL	1	FT
7	Viper ASV-10	TJ		2000	N	13400	1.01	1880	N	13100	1.01	1720	N	12700	1.02	N	A	7	3.91	FT	1	FT
8	Viper II	TJ		2460	N	13400	1.11	2260	N	13100	1.10	2020	N	12700	1.10	N	A	7	4.00	FT	1	FT
9	P-182	TP	S	200	1100	20000	.65	180	960	19500	.65	165	810	18900	.68	EP	AC	3	6.90	Do	3	FT
10	P-181	ST	S	200	1020	20000	.71	195	980	19800	.72	182	930	19500	.72		AC	3	5.90	Do	3	FT
11	Viper ASV-9	TJ		1900	N	13800	1.12[1]	1760	N	13500	1.12[1]	1590	N	13100	1.12[1]	N	Ce	7	4.25	T		
12	Viper ASV-12	TJ		2700	N	13800	1.14[1]	2570	N	13500	1.12[1]	2360	N	13100	1.11[1]	N	A	7	4.16	FT		
13	Sapphire Sa-7	TJ		12390	N	8500	1.20[1]		N				N			N	A	13		FT		
14	Blackburn Palouste 500	Ac	S														Ce	1		In	2	In
15	Artouste 510	AP	S		80	34200			80	34200							Ce	1	3.80	In		
16	Artouste 600	ST	S		475		.99[2]		414	34000	1.03[2]					SpG	Ce	1	4.12	In	2	In
17	Palas 600	TJ	S	390	N	35000	1.20[1]	340	N	33000	1.14[1]	365	N	34000	1.17[1]	N	Ce	1	4.12	In	1	In
18	Turmo 600	Tur	S		450		1.04[2]		400	34000	1.07[2]					SpG	Ce	1	4.12	In	2	In
19	A-129	FrT	S	100	970	6000	.68[1]										CA	3	6.50	In		
20	Bristol Orpheus 701	TJ		4520	N				N				N			N	A	7		FT	1	FT
21	Orpheus 803	TJ		5000	N		1.06		N				N			N	A	7		FT	1	FT
22	Orpheus BOr 4	TJ		4230	N				N				N			N	A	7		FT	1	FT
23	Orpheus BOr 11	TJ		5760	N				N				N			N	A					
24	Orpheus BOr 12	TJ		8170	N				N				N			N	A					
25	Olympus 102	TJ		12000	N		.81[1]		N				N			N	A	15		FT	2	FT
26	Olympus 104	TJ		13000	N				N				N			N	A					
27	Olympus 200	TJ		16000	N				N				N			N	A					
28	Proteus 765	TP	S	1260	3960		.60[2]	1165	3520		.60[2]	380	2197		.48[1]	P	AC	13	7.20	FT	4	FT
29	Olympus 201	TJ	S	17000	N				N				N			N	A					
30	De Havilland Gyron Jr. DGJ 1	TJ		7000	N				N				N			N	A	7				
31	Gyron DGy 2	TJ		20000	N		1.04[1]		N				N			N	A	7		FT		
32	Goblin 35	TJ	S	3500	N	10750	1.19[1]	2320	N	9500	1.16[1]	3000	N	10250	1.16[1]	N	Ce	1	3.67	In	1	FT
33	Ghost Mark 105	TJ	S	5300	N		1.19[1]	4480	N		1.13[1]		N			N	Ce	1	4.70	FT		
34	Gnome DGr 1	ST			1000	19500	.65[2]						900	19500	.67[2]	SpG	A	10		Do		
35	Napier Eland NEI 1	TP	S	805	2750	12500	.64[2]	675	2070	12000	.68[2]	585	1665	11500	.69[2]	P	A	10	7.00	FT	3	FT
36	Eland NEI 3	TP	S	500	2805	12500	.67[2]	420	2180	12000	.71[2]	355	1710	11500	.76[2]	P	A	10[7]	7.00[7]	FT	3	FT
37	Eland NEI 6	TP	S	700	3230	12500	.60[2]	625	2670	12000	.62[2]	560	2425	11750	.64[2]	P	A	10	7.00	FT		
38	Gazelle NGa 1	Tur	S	260	1260	20400	.71[2]	230	1100	19800	.73[2]	200	920	19000	.77[2]	P	A	11	6.37	FT	3	FT
39	Gazelle NGa 2	Tur	S	325	1650	20400	.68[2]	270	1300	19400	.72[2]	230	1050	18600	.77[2]	P	A	11	6.37	FT	3	FT
40	Gazelle NGa 3	Tur	S	340	1800	20400	.66[2]	285	1450	19500	.70[2]	245	1200	18800	.74[2]	P	A	11	6.37	FT	3	FT
41	Gazelle NGa 4	Tur	S	310	2000	20400	.64[2]	255	1575	19400	.68[2]	225	1350	18800	.71[2]	P	A	11	6.37	FT	3	FT
42	Nomad NNm 6	TP	C	228	3046	2050	.35[2]	145	2393	1900	.35[2]		2050	1450	.33[2]	SpG	A	12	8.25			
43	Oryx NOr 1	TG	S		780	21900	.68[2]		615	21000	.73[2]		690	21400	.70[2]	N	A	12[8]	6.00[8]	FT	2	FT
44	Oryx NOr 4	TG	S		865	22400	.65[2]		692	21400	.70[2]		778	21900	.68[2]	N	A	12[8]	6.00[8]	FT	2	FT
45	Oryx NOr 5	TG	S		950	22600	.62[2]		900	22400	.63[2]		800	21900	.68[2]	N	A	12[8]	6.00[8]	FT	2	FT
46	Eland NEI 7	TP		650	3250	12500	.61[2]	625	2900	12500	.63[2]	550	2600	12000	.63[2]	P	A	10[7]	7.00	FT		
47	Eland 504	TP	S	680	3150	12500	.62[2]	610	2600	12000	.65[2]	555	2360	11750	.66[2]	P	A	10	7.00	FT		
48	Rolls-Royce Avon RA 7	TJ	S	7500	N		.92[1]		N				N			N	A	12	6.50	In	2	FT
49	Avon RA 21	TJ	S	8150	N		.93[1]		N				N			N	A	12	6.40	In	2	FT
50	Avon RA 24, RA 24 R	TJ			N				N				N			N						
51	Avon RA 28		S	10000	N		.86[1]		N				N			N	A					
52	Avon RA 29	TJ	S	10500	N		.77		N				N			N	A			In	2	FT
53	Conway RCo 10	TJ	S	16500	N				N				N			N	A					
54	Dart RDa 10	TP	S	670	2660	15000	.64[2]					585	2100	14500	.66[2]	P	Ce	2		In	3	FT
55	Dart RDa 11	TP	S	655	2100	15000	.67[2]					570	1820	14500	.70[2]	P	Ce	2		In		
56	Dart 21	TP	S	430	1950	15000	.61[2]					315	1575	14200	.66[2]	P	Ce	2		In		
57	Dart 506	TP	S	365	1400	14500	.73[2]					295	1120	13800	.87[2]	P	Ce	2	5.50	In	2	FT
58	Dart 510	TP	S	370	1600	14500	.69[2]					300	1365	14000	.79[2]	P	Ce	2	5.50	In	2	FT
59	Dart 511	TP	S	370	1600	14500	.70[2]					300	1460	14200	.77[2]	P	Ce	2	5.50	In	2	FT
60	Dart 520	TP	S	495	1700	15000	.70[2]					295	1720	14400	.71[2]	P	Ce	2	5.75	In	3	FT
61	Dart 525, 528	TP	S	500	1800	15000	.68[2]					440	1650	14400	.70[2]	P	Ce	2	5.75	In	3	FT
62	Dart 526, 527, 529	TP	S	505	1910	15000	.66[2]					445	1750	14400	.68[2]	P	Ce	2	5.60	In	3	FT
63	Nene 103	TJ	S	5400	N	12700	1.07[1]		N			4240	N	12000	1.05[1]	N	Ce	2	4.54	In	1	FT
64	RB 108	TJ			N				N				N			N						
65	Soar RSr 2	TJ	S	1810	N		1.26[1]		N				N			N	A					
66	Tyne RTy 1	TP	S	1265	4795	15250	.49[2]									P	A		13.00			
67	Tyne RTy 11	TP	S	1290	4885	15250	.47[2]					1080	4455	14100	.47[2]	P	A					
68	RB 141	TJ		12000	N				N				N			N	A					
69	RB 145	TJ		2750	N				N				N			N	A					
70	Conway RCo 11	TJ		17250	N				N				N			N						
71	Conway RCo 12	TJ		17500	N				N				N			N						
72	Conway RCo 15	TJ		18500	N				N				N			N						

ABBREVIATIONS

1—Lb./hr./lb. thrust.
2—Lb./hp./hr.
3—Lb./hr.
4—Air horsepower.
5—Plus.
6—Included in main pump.
7—Main compressor only; 9 stage auxiliary compressor, 4.50.
8—Main compressor only; 4 stage auxiliary compressor, 1.80.
9—Lb./equiv. shp/hr.
10—Based on water/alcohol augmentation.
11—30 min. military power rating.

A—Axial. Ac—Air compressor.
AC—Axial centrifugal.
AE—Air equipment.
AK—Aviation kerosene.
An—Annular.
AP—Auxiliary power unit.
AR—Air Research Co.
AS—Air supply. Ba—Ball.
B-C—Bendix and Ceco.
Ben—Bendix. Br—Breeze Corp.
B-S—Bronzavia-Snecma.
C—Coupled.
CA—Centrifugal and axial.
Cc—Ceco. Ce—Centrifugal.
CE—Chandler-Evans Co.
CL—Clamped. Cy—Cylindrical.
Cn—Cannular. De—Diesel fuel.
DF—Direct flow.
DI—Dependent upon installation.
Do—Dovetail. Du—Dual entry.
Dow—Dowty. E—Electronic.
EP—Epicyclic.
FA—Furnished by airframe manufacturer.

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TURBINES—*concluded*

COMBUSTION CHAMBERS				FUEL SYSTEM						IGNITION SYSTEM		LUBRICATION		MAKE OF COMPONENT PARTS					OVERALL DIMENSIONS			DRY WEIGHT		
Arrangement	No. Used	Material	Air Intake	No. of Pumps	No. of Emergency Pumps	Fuel Controls	Afterburning	Recommended Octane Rating of Fuel	No. Fuel Nozzles per Combustion Chamber	No. of Ignitors	Type of Ignitor	Sump Capacity (Pts.)	Max. Oil Consumption (Pts./Hr.)	Starter	Generator	Governor	Vacuum Pump	Fuel Pumps	Length (In.) With Extension Pipe	Length (In.) Without Extension Pipe	Max. Diameter (In.)	With Component Parts (Lb.)	Without Component Parts (Lb.)	Line Number
GREAT BRITAIN																								
An	1	NS	DF	1	N		N	K,De	24	2	HE	56.0	.5	Rot	FA	Dow	FA	Dow	98.7		52.8		2180	1
An	1	NS	DF	1	N		N	G,K	24	2	HE	39.0	.5	Rot	Rot	Dow	FA	Dow	61.4		33.9		1003	2
An	1	NS	DF	1	N	H	N	K	12	2	HE	56.0	.5	Rot	FA	Luc		Luc		98.6	56.6	2450	2513	3
An	1	NS	DF	1	N		N	K	36	2		16.0	1.5	Rot	FA	Dow	FA	Dow	133.9	107.0	37.3		2670	4
An	1	NS	DF	1	N			K	24	2		24.0	1.0	BTH	FA	Dow	FA	Dow	132.0		37.9	3050	3130	5
An	1	NS	DF	1	N	HM	N	K	24	2	HE	14.0	1.5	Rot	FA	Luc	FA	Luc	67.0	46.5	24.3	527	470	6
An	1	NS	DF	1	N	HM	N	K	24	2	HE		1.5	FA	FA	Luc	FA	Luc	75.2	64.0	24.5	552	500	7
An	1	NS	DF	1	N	HM	N	K	24	2	HE		1.3	FA	FA	Luc	FA	FA	75.2	64.0	24.5	552	500	8
An	1	NS	DF	1	N	HM	N	K	13	2	HE	18.0	.3	Rot	FA		FA	Dow	60.2		27.5		625	9
An	1	NS	DF	1	N	HM	N	K	13	2	HE	18.0	.3	Rot	FA		FA	Luc	60.8		27.5		430	10
An		NS	DF	1		HM	N		24	2	HE	14.0	1.5	FA	FA	Luc	FA	Luc	67.0	46.5	24.3	527	470	11
An			DF	1	N	HM	N		24	2	HE	Var	1.5	DI	DI	Luc	Luc	Luc	75.2	64.0	24.6	552	500	12
An			DF	1	N				24	2		15.0	1.5	R-I		Dow		Dow	107.8	125.3	37.9	3110		13
An	1	NS	DF	1	N	M	N		RI	1	To	8.0	.5	Ple	Rot	Luc	N	Ple	44.5	33.0	18.0		206	14
An	1			1	N	M	N		RI	1	Sp	6.0	.5	Ple	Rot	Luc	N	Ple						15
An	1	NS	DF	1	N		N		RI	1	To	8.0	.5	Ple	Rot	Luc	N	Ple		44.0	19.5		306	16
An	1	NS	DF	1	N	M	N		RI	1	To	8.0	.5	Ple	Rot	Luc	N	Ple	43.8	30.0	18.0		168	17
An	1	NS	DF	1	N	M	N		RI	1	To	8.0	.5	Ple	Rot	Luc	N	Ple		52.2	18.8		310	18
An	1	NS	DF	1		M			RI	1	To			Ple	Rot	Luc		Ple		60.0	20.0	390		19
Cn	7		DF	1	N		N		1	2		12.0	2.0	Rot	Rot	Luc	N	Luc		73.0	32.4		790	20
Cn	7		DF	1	N		N		1	2		14.0	2.0	BTH	Lab	Luc	N	Luc		75.5	32.4		825	21
Cn	7		DF	1	N		N		1															22
							N																	23
							Y																	24
Cn	10		DF	1	N		N		1											132.0	42.4		3750	25
Cn				1	N		N		1											132.0	42.4			26
Cn																				126.4	41.8			27
Cy	8	NS		1	N	H	N		1	2	Sp		2.0	Rot	Rot	Luc	N	Luc		100.6	40.1	2900		28
An				2	N	H	Y		8											126.4	41.8			29
An			DF	1		HM	Y		17	2	Sp			Own				Dow	102.9		41.1			30
An		NS	DF	2		HM	Y		17	2	Sp	32.0		Own				Luc	155.5	121.3	55.2	4270		31
Cy	16	NS	DF	2			N		1	2	Sp	10.0	2.0	Rot	RNB	Own	Ple	Luc		100.5	49.9	1630		32
Cy	10	NS	DF	1		HM	N		1	2	Sp	18.0	2.5	Rot	BTH			Luc	129.0	63.4	52.7	2179		33
An	1		DF	1		HM	N		16	1	HE	Dry		Rot		Luc		Luc	54.8		19.6		275	34
Cy	6	NS	DF	1	N	HM	N		1	2	Sp	Dry	2.0	Rot		Rtl		Luc		122.0	36.0	1750		35
Cy	6	NS	DF	1	N	HM	N		1	2	Sp	Dry	2.0	Rot		Rtl		Luc		158.3	36.0	2435		36
Cy	6		DF	1	N	HM	N	DERD2482	1	2	Sp	Dry	2.0	Rot		Rtl		Luc		115.5	36.0	1820		37
Cy	6	NS	DF	1	N	HM	N		1	2	Sp	Dry	1.0	BTH				Luc		70.0	33.5	780		38
Cy	6	NS	DF	1	N	HM	N		1	2	Sp	Dry	1.0	BTH				Luc		70.0	33.5	830		39
Cy	6	NS	DF	1	N	HM	N		1	2	Sp	Dry	1.0	BTH				Luc		70.0	33.5	865		40
Cy	6	NS	DF	1	N	HM	N		1	2	Sp	Dry	1.0	BTH				Luc		70.0	33.5	900		41
	3			1		M		K,De,G	1				2.2	Rot						109.6	58.5		3580	42
Cy	5	NS	DF	1	N	HM	N		1	2	Sp	Dry	1.0	Rot				Luc		83.5	19.3	495		43
Cy	5	NS	DF	1	N	HM	N		1	2	Sp	Dry	1.0	Rot				Luc		83.5	19.3	495		44
Cy	5	NS	DF	1	N	HM	N		1	2	Sp	Dry	1.0	Rot				Luc		83.5	19.3	515		45
Cy	6		DF	1	N	HM	N	DERD2482	1	2	Sp	Dry	2.0	Rot		Rtl		Luc		158.3	36.0	2525		46
Cy	6		DF	1	N	HM	N	JP-1,JP-4	1	2	Sp	Dry	2.0	Rot		Rtl		Luc		115.5		1820		47
Cy	8		DF	2	N		N	K	1	2	HE	16.0	1.0	Ple				Luc		102.1	42.2		2460	48
Cy	8	NS	DF	2	N			K	1	2	HE	16.0	1.0	Ple				Luc		102.1	42.2		2520	49
			DF																					50
An			DF					K												113.3	41.5		4890	51
Cn	8	NS	DF	2	N	M	N	K,JP-1 or 2	1	2	HE	9.6	.8	Rot	Rot		N	Luc		126.0	44.5		3320	52
Cn			DF					K												130.7	42.0			53
Cy	7		DF	1	N	M	N	K	1	2	HE	25.0	1.0	Rot	N		N	Luc		98.4	37.9		1320	54
Cy	7	NS	DF	1	N		N	K		2	HE	25.0	1.0	Rot	N		N	Luc		98.4	37.9		1320	55
Cy	7	NS	DF	1	N		N	K	1	2	HE	25.0	1.0	Rot	N		N	Luc		97.6	37.9		1240	56
Cy	7	NS	DF	1	N	M	N	K,JP-1 or 0	1	2	HE	25.0	1.0	Rot	N		N	Luc		95.0	38.0		1044	57
Cy	7	NS	DF	1	N	M	N	K,JP-1 or 0	1	2	HE	25.0	1.0	Rot	N		N	Luc		97.0	38.0		1110	58
Cy	7	NS	DF	1	N	M	N	K,JP-1 or 0	1	2	HE	25.0	1.0	Rot	N		N	Luc		97.0	38.0		1195	59
Cy	7		DF	1	N	M	N	K	1	2	HE				N		N	Luc		97.6	37.9		1250	60
Cy	7		DF	1	N	M	N	K	1	2	HE				N		N	Luc		97.6	37.9		1250	61
Cy	7	NS	DF	1	N	M	N	K	1	2	HE	25.0	1.0	Rot	N		N	Luc		97.0	37.9		1250	62
Cy	9	NS	DF	2	N	M	N	K,JP-1 or 0	1	2	HE	13.5	1.0	Ple	N		N	Luc		78.0	49.5		1612	63
			DF																					64
An			DF					K												58.9	15.8		275	65
																				110.1	39.4		2063	66
			DF																	110.1	39.4		2062	67
An										2	HE													68
An											HE													69
																								70
																								71
																								72

FP—Furnished by propeller manufacturer.
FrT—Free turbine. **FT**—Fir tree.
G—Gasoline.
GE—General Electric.
Gov—Government furnished equipment.
H—Hydraulic.
HE—High energy.
HM—Hydro-mechanical.
HP—Hydro-pneumatic.
HS—Hamilton-Standard.
In—Integral.
JH—Jack and Heintz.
K—Kerosene.
LR—Lear-Romeo.
Luc—Lucas.
M—Mechanical. **MF**—Mixed flow.
N—No or None.
Ne—Negligible. **NS**—Nimonic sheet.
P—Planetary. **Ple**—Plessey.
Pes—Pesco. **Pn**—Pneumatic.
P-T—Pesco or Thompson.
RF—Reverse flow.
RI—Rotary injector.
R-I—Rotax or I.P.N.
RNB—Rotax, Newton or B. T. H.
Rot—Rotax. **S**—Single.
Rtl—Rotol. **SA**—Steel alloy.
SG—Spark and glow.
Sp—Spark. **ST**—Shaft turbine.
SpG—Spur gear. **T**—"T" slot.
SS—Stainless steel. **Ta**—Tangs.
TF—Through flow.
TG—Turbo gas generator.
Th—Thompson Products.
Tj—Turbo-jet. **TP**—Turbo-prop.
To—Torch. **TuF**—Turbo fan.
Tur—Free turbine engine.
Var—Various. **Ww**—Woodward.
W—Welded. **Y**—Yes.

For Directory of the Gas Turbine Manufacturers listed above, see Table of Contents

1959 . . . U.S. AIRCRAFT ENGINES

RECIPROCATING TYPE

ENGINE MAKE AND MODEL	A. T. C. Number	GENERAL DATA: Arrangement	Cooling Medium	Number of Cylinders Bore and Stroke (In.)	Total Piston Displacement (Cu. In.)	Compression Ratio (to —1)	B.M.E.P. at Maximum Hp. (Lb. per Sq. In.)	Blower Ratio	Cylinder Material	No. of Valves per Cylinder: Intake	Exhaust	Valve Arrangement	RATINGS: Maximum (Except Take-off): Horsepower	R. P. M.	At Sea Level or Altitude (Ft.)	Take-off: Horsepower	R. P. M.	Cruising: Horsepower	R. P. M.	Octane Rating of Fuel Required	Propeller Drive Ratio (to —1)	Weight (Lb.): Engine Dry—Without Hub or Starter	Per Maximum Hp. (Except Take-off)	Carburetor: Number Used and Make	Type	Ignition System Make	Starting: Make	Method	Installation Dimensions (Overall—Ins.): Length	Height or O. D.	Width	Height above Engine Bed	Diameter Mounting Ring or Distance Between Bearers
Continental A-65-8F	205	Hor	Air	4-3⅞x3⅝	171.0	6.30	131	•N	SA	1	1	IH	65	2300	SL	65	2300			80/87	D	170	2.62	1-MS	FL	Scin	N		28.34	27.83	31.56		(1)
A-65-12F	205	Hor	Air	4-3⅞x3⅝	171.0	6.30	131	N	SA	1	1	IH	65	2300	SL	65	2300			80/87	D	174	2.68	1-MS	FL	Scin	DR	EM	31.26	28.72	31.56		(1)
C-85-8F	233	Hor	Air	4-4¹⁄₁₆x3⅝	188.0	6.30	139	N	SA	1	1	IH	85	2575	SL	85	2575			80/87	D	176	2.07	1-MS	FL	Scin	N		28.34	27.83	31.56		(1)
C-85-12F	233	Hor	Air	4-4¹⁄₁₆x3⅝	188.0	6.30	139	N	SA	1	1	IH	85	2575	SL	85	2575			80/87	D	180	2.12	1-MS	FL	Scin	DR	EM	31.26	28.72	31.56		(1)
C-90-8F	252	Hor	Air	4-4¹⁄₁₆x3⅞	200.9	7.00	143	N	SA	1	1	IH	90	2475	SL	90	2475			80/87	D	184	2.04	1-MS	FL	Scin	N		28.34	27.83	31.56		(1)
C-90-12F	252	Hor	Air	4-4¹⁄₁₆x3⅞	200.9	7.00	143	N	SA	1	1	IH	90	2475	SL	90	2475			80/87	D	188	2.09	1-MS	FL	Scin	DR	EM	31.26	28.72	31.56		(1)
E-185-9	246	Hor	Air	6-5x4	471.0	7.00	135	N	SA	1	1	IH	185	2300	SL	205	2600			80/87	D	352	1.90	1-Str	PI	Scin	DR	EM	46.66	22.30	33.41		(2)
E-225-4	267	Hor	Air	6-5x4	471.0	7.00	146	N	SA	1	1	IH	225	2600	SL	225	2600			80/87	D	355	1.58	1-Ben	PI	Scin	Ecl	EM	46.66	22.30	33.41		(2)
O-200-A	252	Hor	Air	4-4¹⁄₁₆x3⅞	200.9	7.00	143	N	SA	1	1	IH	100	2750	SL	100	2750			80/87	D	190	1.90	1-MS	FL	Scin	DR	EM	28.53	23.18	31.56		(1)
O-300-A	253	Hor	Air	6-4¹⁄₁₆x3⅞	301.0	7.00	141	N	SA	1	1	IH	145	2700	SL	145	2700			80/87	D	268	1.85	1-MS	FL	Scin	DR	EM	35.38	23.25	31.56		(2)
GO-300-A	298	Hor	Air	6-4¹⁄₁₆x3⅞	301.0	7.30	144	N	SA	1	1	IH	175	3200	SL	175	3200			80/87	.7500	314	1.79	1-MS	FL	Scin	DR	EM	39.12	27.05	31.56		(2)
O-470-4	273	Hor	Air	6-5x4	471.0	8.00	156	N	NA	1	1	IH	240	2600	SL	240	2600			91/96	D	431	1.80	1-Ben	PI	Scin	DR	EM	37.56	26.69	33.58		
O-470-13A	269	Hor	Air	6-5x4	471.0	7.00	146	N	SA	1	1	IH	225	2600	SL	225	2600			80/87	D	415	1.84	1-Ben	PI	Scin	Ecl	EM	40.96	26.44	33.62		
O-470-15	269	Hor	Air	6-5x4	471.0	7.00	140	N	SA	1	1	IH	190	2300	SL	213	2600			80/87	D	405	2.13	1-Str	FL	Scin	DR	EM	44.75	26.61	33.41		(2)
O-470-J	273	Hor	Air	6-5x4	471.0	7.00	165	N	SA	1	1	IH	225	2550	SL	225	2550			80/87	D	378	1.68	1-MS	FL	Scin	DR	EM	36.03	27.75	33.58		(2)
O-470-K & L	273	Hor	Air	6-5x4	471.0	7.00	149	N	SA	1	1	IH	230	2600	SL	230	2600			80/87	D	404	1.76	1-MS	FL	Scin	DR	EM	36.03	27.75	33.58		(2)
O-470-M	273	Hor	Air	6-5x4	471.0	8.00	156	N	SA	1	1	IH	240	2600	SL	240	2600			91/96	D	410	1.71	1-MS	FL	Scin	DR	EM	43.31	19.62	33.56		(2)
O-470-2	281	Hor	Air	6-5x4	471.0	7.00	162	10.36	SA	1	1	IH	250	2600	10000	265	2600			100/130	D	484	1.94	1-Ben	PI	Scin	DR	EM	37.73	30.77	33.62		(2)
10-470-C	273	Hor	Air	6-5x4	471.0	8.00	162	N	SA	1	1	IH	250	2600	SL	250	2600			91/96	D	432	1.73	1-CMC	Inj	Scin	DR	EM	37.56	26.25	33.58		(2)
10-470-D	3E1	Hor	Air	6-5x4	471.0	8.60	167	N	SA	1	1	IH	260	2625	SL	260	2625			100/130	D	430	1.65	1-CMC	Inj	Scin	DR	EM	43.31	19.75	33.56		(2)
FSO-526-A[3]	292	Hor	Air[4]	6-5⅛x4¼	526.0	6.00	129	10.04	SA	1	1	IH	270	3000	7900	270	3200			91/96	D	553	2.05	1-Ben	PI	Scin	DR	EM	50.33	28.54	34.64		(2)
GSO-526-A	303	Hor	Air	6-5⅛x4¼	526.0	6.00	151	12.88	SA	1	1	IH	300	3000	14500	340	3100			91/96	.6880	556	1.85	1-Ben	PI	Scin	DR	EM	52.28	23.96	34.68		(2)
Franklin 4A4-100-B3	239	Hor	Air	4-4½x3½	225.0	7.00	136	N	AC	1	1	IH	100	2600	SL			75	2370	80	D	214	2.14	1-MS	FL	Eis	AL	EM	30.68	20.59	30.81	12.03	
6A4-150-B3	238	Hor	Air	6-4½x3½	335.0	7.00	136	N	AC	1	1	IH	150	2600	SL			113	2370	80	D	291	1.94	1-MS	FL	Eis	DR	EM	37.37	22.59	30.81	13.03	
6A4-165-B3	238	Hor	Air	6-4½x3½	335.0	7.00	139	N	AC	1	1	IH	165	2800	SL			124	2550	80	D	307	1.86	1-MS	PI	Scin	DR	EM	37.37	25.31	30.81	13.03	
6V4-200-C32, C33	244	Ver	Air	6-4½x3½	335.0	8.50	152	N	AC	1	1	IH	200	3100	SL					91	D	306	1.53	1-BM	P-FL	Scin	DR	EM	26.81	36.00	30.81		
6AG4-190-B13	238	Hor	Air	6-4½x3½	335.0	7.60	141	N	AC	1	1	IH	190	3100	SL					80	.6320	324	1.11	1-BM	P-FL	Scin	DR	EM	40.59	26.12	30.81		
6V-335-A, B	244	Ver	Air	6-4½x3½	335.0	8.50	157	N	AC	1	1	IH	210	3100	SL					91		306	1.46	1-MS	FL	Scin	DR	EM	26.81	36.00	30.81		
6A-335-A	244	Hor	Air	6-4½x3½	335.0	8.50	157	N	AC	1	1	IH	210	3100	SL					91		307	1.46	1-MS	FL	Scin	DR	EM	40.59	26.12	30.81		
Herrmann X-375	293	Bar	Liq	12-3¼x3¾	373.0	8.00	112		Alu	1	1	OH	175	1800		200	1900	175	1800	80/87	D	322	1.84	2-Str	FL	S-A	DR	EM	50.50	18.00	21.50	12.00	10.00
Lycoming O-235-C1	223	Hor	Air	4-4⅜x3⅞	233.3	6.75	141	N	SA	1	1	IH	108	2600	SL	115	2800	81	2360	80	D	207	1.92	1-MS	FL	Scin	DR	EM	29.56	22.53	32.00		
O-290-D2B[3]	229	Hor	Air	4-4⅞x3⅞	289.0	7.00	137	N	SA	1	1	IH	135	2600	SL	140	2800	100	2350	80/87	D	236	1.75	1-MS	FL	Scin	DR	EM	29.56	22.81	32.24		(1)
O-320-A1A[3]	274	Hor	Air	4-5⅛x3⅞	319.8	7.00	138	N	SA	1	1	IH	150	2700	SL	150	2700	112	2450	80/87	D	244	1.62	1-MS	FL	Scin	DR	EM	29.56	23.12	32.24		(1)
O-320-B1A	279	Hor	Air	4-5⅛x3⅞	319.8	8.50	147	N	SA	1	1	IH	160	2700	SL	160	2700	120	2450	91/96	D	250	1.55	1-MS	FL	Scin	DR	EM	29.56	23.12	32.24		(1)
O-340-A1A	277	Hor	Air	4-5⅛x3⅜	340.4	8.40	146	N	SA	1	1	IH	170	2700	SL	170	2700	127	2450	91/96	D	250	1.47	1-MS	FL	Scin	DR	EM	29.56	24.68	32.55		(1)
O-340-B1A	277	Hor	Air	4-5⅛x4⅛	340.4	7.15	138	N	NA	1	1	IH	160	2700	SL	160	2700	120	2450	80/87	D	247	1.54	1-MS	FL	Scin	DR	EM	29.56	24.68	32.55		(1)
O-360-A1A	286	Hor	Air	4-5⅛x4⅜	361.0	8.50	148	N	SA	1	1	IH	180	2700	SL	180	2700	135	2450	91/96	D	257	1.41	1-BM	P-FL	Scin	DR	EM	29.56	24.72	33.37		(1)
O-435-23B[3]	279	Ver	Air	6-4⅞x3⅞	434.0	7.30	143	N	NA	1	1	IH	250	3200	SL	260	3400	200	3200	80/87	D	396	1.58	1-MS	FL-P	Scin	Opt	EH	34.73	25.19	33.32		
VO-435-A1D (O-435-6A)[3]	279	Ver	Air	6-4⅞x3⅞	434.0	7.30	143	N	NA	1	1	IH	250	3200	SL	260	3400	200	3200	80/87	D	390	1.56	1-MS	FL-P	Scin	Opt	EH	34.73	25.19	33.32		
GO-435-C2B2	228	Hor	Air	6-4⅞x3⅞	434.0	7.30	146	N	NA	1	1	IH	240	3000	SL	260	3400	180	2750	80/87	.6420	430	1.79	1-BM	P-FL	Scin	Opt	EM	38.64	28.02	33.12		(2)
GO-480-B1A6	275	Hor	Air	6-5⅛x3⅞	479.7	7.30	143	N	NA	1	1	IH	260	3000	SL	270	3400	195	2750	80/87	.6420	432	1.68	1-Str	PI	Scin	Opt	EM	38.64	28.02	33.12		(2)
GO-480-B1D	275	Hor	Air	6-5⅛x3⅞	479.7	7.30	143	N	NA	1	1	IH	260	3000	SL	270	3400	195	2750	80/87	.6420	432	1.66	1-Str	PI	Scin	Opt	EM	38.64	28.02	33.12		(2)
GO-480-G1B6	275	Hor	Air	6-5⅛x3⅞	479.7	8.70	154	N	SA	1	1	IH	280	3000	SL	295	3400	210	2750	100/130	.6420	464	1.64	1-Str	PI	Scin	Opt	EM	40.04	27.46	33.12		(2)
GO-480-G2D6	275	Hor	Air	6-5⅛x3⅞	479.7	8.70	152	N	NA	1	1	IH	285	3100	SL	295	3400	210	2750	100/130	.6420	442	1.55	1-Str	PI	Scin	Opt	EM	40.59	28.02	33.12		(2)
GO-480-D1A	275	Hor	Air	6-5⅛x3⅞	479.7	7.30	143	N	SA	1	1	IH	260	3000	SL	275	3400	195	2750	80/87	.6420	454	1.75	1-Str	PI	Scin	Opt	EM	40.04	27.46	33.12		(2)
GSO-480-B1A6	284	Hor	Air	6-5⅛x3⅞	479.7	7.30	154	11.27	SA	1	1	IH	320	3200	8000	340	3400	240	2750	100/130	.6420	498	1.56	1-Str	PI	Scin	Opt	EM	49.31	33.08	33.12		(2)
GSO-480-B1B6 (O-480-1)	284	Hor	Air	6-5⅛x3⅞	479.7	7.30	154	11.27	SA	1	1	IH	320	3200	8000	340	3400	240	2750	100/130	.6420	500	1.56	1-Str	PI	Scin	Opt	EM	46.22	33.26	33.12		(2)
GSO-480-B1C6	284	Hor	Air	6-5⅛x3⅞	479.7	7.30	154	11.27	SA	1	1	IH	320	3200	8000	340	3400	240	2750	100/130	.6420	497	1.55	1-Str	PI	Scin	Opt	EM	52.18	22.56	33.12		(2)
O-540-A1A5	295	Hor	Air	6-5⅛x4⅜	541.5	8.50	139	N	SA	1	1	IH	260	2700	SL	265	2800	195	2450	91/96	D	367	1.41	1-MS	FL	Scin	DR	EM	37.22	25.81	33.37		(1)
SO-580-A1B	285	Hor	Air	8-4⅞x3⅞	578.0	7.30	160	7.91	NA	1	1	IH	350	3000	6000	400	3300	280	3000	100/130	D	578	1.65	1-Str	PI	Scin	Opt	EM	46.67	24.49	33.12		(2)
VSO-580-A1A (O-580-3)[3]	285	Ver	Air	8-4⅞x3⅞	578.0	7.30	160	7.91	SA	1	1	IH	350	3000	6000	400	3300	280	3000	100/130	D	574	1.64	1-Str	PI	Scin	Opt	EM	49.20	30.75	33.18		
GSO-580-D	256	Hor	Air	8-4⅞x3⅞	578.0	7.30	160	7.91	SA	1	1	IH	350	3000	5000	400	3300	260	2750	100/130	.6420	608	1.73	1-Str	PI	Scin	Opt	EM	56.86	34.22	33.18		(2)
O-360-C2B[3]	286	Hor	Air	4-5⅛x4⅜	361.0	8.50	146	N	SA	1	1	IH	180	2700	SL	180	2700	135	2450	91/96	D	261	1.45	1-Ben	PI	Scin	DR	EM	30.67	19.81	33.37		(1)
VO-360-A1A[5]	Per	Ver	Air	4-5⅛x4⅜	361.0	8.50	136	N	SA	1	1	IH	180	2900	SL	180	2900	145	2900	91/96	D	270	1.50	1-MS	FL	Scin	DR	EM	29.79	21.92	33.37		(1)

	IMO-360-A1A	(6)	Hor	Air	4-5⅛x4⅜	361.0	8.50	146	N	SA	1	1	IH	180	2700	SL	180	2700	135	2450	91/96	D	251	1.39	1-MS	FL	Scin	.....	HC	32.68	17.49	33.37	.....	(1)
	GO-480-G1A6	275	Hor	Air	6-5⅛x3⅞	479.7	8.70	143	N	SA	1	1	IH	280	3000	SL	295	3400	210	2750	100/130	.6420	439	1.57	1-Ben	PI	Scin	Opt	EM	38.64	28.02	33.12	.....	(2)
	GO-480-C1D6	275	Hor	Air	6-5⅛x3⅞	479.7	8.70	143	N	SA	1	1	IH	280	3000	SL	295	3400	210	2750	100/130	.6420	437	1.56	1-Ben	PI	Scin	Opt	EM	38.64	28.02	33.12	.....	(2)
	IGSO-480-A1A6	284	Hor	Air	6-5⅛x3⅞	479.7	7.30	165	11.27	SA	1	1	IH	320	3200	11000	340	3400	240	2750	100/130	.6420	496	1.55	1-Sim	Inj	Scin	Opt	EM	47.56	23.29	33.12	.....	(2)
	O-540-A2B	295	Hor	Air	6-5⅛x4⅜	541.5	8.50	157	N	SA	1	1	IH	250	2575	SL	250	2575	190	2350	91/96	D	367	1.47	1-MS	FL	Scin	DR	EM	37.22	25.81	33.37	.....	(1)
Pratt & Whitney	CB-16	264	Rad	Air	18-5¾x6	2804.0	6.70	196	.....	SD	1	1	IH	1800	2600	8500	2050[7]	2700[8]	1800	2600	100/130	.4500	2390	1.33	1-Str	PI	Scin	.....	.....	81.40	52.80	.....	.....	.....
		.....	(2-Speed Blower Engine)				.....	174	.....	.....	.....	.....	.....	1600	.....	16000	1850[9]	2600[9]	1700	.....	.....	.....	.....	1.49	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	CB-17	264	Rad	Air	18-5¾x6	2804.0	6.70	196	.....	SD	1	1	IH	1800	2600	8500	2200[10]	2800	1900	2600	108/135	.4500	2390	1.33	1-Str	PI	Scin	.....	.....	81.40	52.80	.....	.....	.....
		.....	(2-Speed Blower Engine)				.....	185	.....	.....	.....	.....	.....	1700	.....	14500	1900[9]	2600[9]	1750	.....	.....	.....	.....	1.41	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Wright	957C7BA1	261	Rad	Air	7-6⅛x6 5/16	1301.0	6.20	178	7.21	SA	1	1	IH	700	2400	7300	800	2600	490	2200	91/96	.5625	1065	1.52	1-Str	PI	Bos	Opt	EM	48.10	50.45	.....	.....	32.75
	968C9HE1	259	Rad	Air	9-6⅛x6⅞	1823.0	6.80	222	7.21	SA	1	1	IH	1275	2500	3500	1475	2800	890	2400	100/130	.5625	1390	1.09	1-Str	PI	Bos	Opt	EM	48.50	54.95	.....	.....	32.75
	975C18CB1	270	Rad	Air	18-6⅛x5 5/16	3350.0	6.70	218	6.46	SA	1	1	IH	2400	2600	5300	2800	2900	1600	2400	115/145	.4375	3065	1.28	1-Str	PI	Scin	Opt	EM	78.47	56.59	.....	.....	40.75
		.....	(2-Speed Blower Engine)				.....	182	8.67	.....	.....	.....	.....	2000	.....	.....	1500	.....	.....	.....	.....	.....	.....	1.53	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	972TC18DA1	272	Rad	Air	18-6⅛x6 5/16	3350.0	6.70	240	6.46	SA	1	1	IH	2650	2600	6509	3250	2900	1910	2400	115/145	.4375	3551	1.34	1-Str	PI	Scin	Opt	EM	89.53	56.59	.....	.....	41.80
		.....	(2-Speed Blower Engine)				.....	222	8.67	.....	.....	.....	.....	2450	.....	17900	2550	2600	1800	.....	.....	.....	.....	1.45	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	DA2	272	Rad	Air	18-6⅛x6 5/16	3350.0	6.70	240	6.46	SA	1	1	IH	2650	2600	6500	3250	2900	1910	2400	115/145	.4375	3543	1.34	1-Str	PI	Scin	Opt	EM	89.53	56.59	.....	.....	41.80
		.....	(2-Speed Blower Engine)				.....	222	8.67	.....	.....	.....	.....	2450	.....	17900	2550	2600	1800	.....	.....	.....	.....	1.45	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	DA3	272	Rad	Air	18-6⅛x6 5/16	3350.0	6.70	249	6.46	SA	1	1	IH	2750	2600	5800	3250	2900	1910	2400	115/145	.4375	3557	1.29	1-Str	PI	Scin	Opt	EM	89.52	56.59	.....	.....	41.80
		.....	(2-Speed Blower Engine)				.....	222	8.67	.....	.....	.....	.....	2450	.....	17900	2550	2600	1800	.....	.....	.....	.....	1.45	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	DA4	272	Rad	Air	18-6⅛x6 5/16	3350.0	6.70	249	6.46	SA	1	1	IH	2750	2600	5800	3250	2900	1910	2400	115/145	.4375	3549	1.29	1-Str	PI	Scin	Opt	EM	89.52	56.59	.....	.....	41.80
		.....	(2-Speed Blower Engine)				.....	222	8.67	.....	.....	.....	.....	2450	.....	17900	2550	2600	1800	.....	.....	.....	.....	1.45	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	982C9HE1	.....	Rad	Air	9-6⅛x6⅞	1823.0	6.80	222	7.21	SA	1	1	IH	1275	2500	3400	1525	2800	890	2400	115/145	.5625	1455	1.15	1-Str	FL	Scin	Opt	EM	50.07	55.75	.....	.....	32.75
	749C18BD1	.....	Rad	Air	18-6⅛x6 5/16	3350.0	6.50	211	8.67	SA	1	1	IH	1800	2400	16000	1900	2600	1400	2400	100/130	.4375	2915	1.62	1-Str	PI	Scin	Opt	EM	78.52	55.62	.....	.....	.....
		.....	(2-Speed Blower Engine)				.....	207	6.46	.....	.....	.....	.....	2100	2400	4400	2500	2800	1470	.....	.....	.....	.....	1.39	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	745C18BA3	.....	Rad	Air	18-6⅛x6 5/16	3350.0	6.50	181	8.67	SA	1	1	IH	1800	2400	15000	1900	2600	1400	2300	100/130	.4375	2780	1.54	1-Str	.....	Scin	Opt	EM	76.26	55.78	.....	.....	.....
		.....	(2-Speed Blower Engine)				.....	197	6.46	.....	.....	.....	.....	2000	2400	4800	2200	2800	.....	.....	.....	.....	.....	1.39	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	988TC18EA1, EA3	287	Rad	Air	18-6⅛x6 5/16	3350.0	6.70	259	6.46	SA	1	1	IH	2850	2600	4700	3400	2900	1910	2400	115/145	.4375	3645	1.26	1-Str	PI	Scin	Opt	EM	89.52	56.59	.....	.....	41.80
		.....	(2-Speed Blower Engine)				.....	222	8.67	.....	.....	.....	.....	2450	2600	16400	2550	2600	1800	.....	.....	.....	.....	1.49	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	988TC18EA2	287	Rad	Air	18-6⅛x6 5/16	3350.0	6.70	259	6.46	SA	1	1	IH	2920	2650	4800	3400	2900	1910	2400	115/145	.3550	3745	1.28	1-Str	PI	Scin	Opt	EM	89.52	56.59	.....	.....	41.80
		.....	(2-Speed Blower Engine)				.....	222	8.67	.....	.....	.....	.....	2450	2600	16400	2550	2600	1800	.....	.....	.....	.....	1.53	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	988TC18EA5	287	Rad	Air	18-6⅛x6 5/16	3350.0	6.70	259	6.46	SA	1	1	IH	2920	2650	4800	3400	2900	1910	2400	115/145	.3550	3775	1.29	1-Str	PI	Scin	Opt	EM	89.52	56.59	.....	.....	41.80
		.....	(2-Speed Blower Engine)				.....	222	8.67	.....	.....	.....	.....	2450	2600	16400	2550	2600	1800	.....	.....	.....	.....	1.54	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	988TC18EA4, EA6	.....	Rad	Air	18-6⅛x6 5/16	3350.0	6.70	259	6.46	SA	1	1	IH	2920	2650	4800	3400	2900	1975	2500	115/145	.4375	3675	1.26	1-Str	PI	Scin	Opt	EM	89.52	56.59	.....	.....	41.80
		.....	(2-Speed Blower Engine)				.....	222	8.67	.....	.....	.....	.....	2450	2600	16400	2550	2600	1950	.....	.....	.....	.....	1.50	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

ABBREVIATIONS

1—A rear type mounting is provided by four mounting bosses integral with the crankcase.
2—A longitudinal type mounting is provided by four mounting bosses integral with the crankcase.
3—Certificated for helicopter application.
4—Cooled by fan.
5—Helicopter engine with vertical crankshaft.
6—Drone engine for unmanned aircraft.
7—2400 with water injection.
8—2800 with water injection.
9—With water injection.
10—2500 with water injection.
AC—Aluminum with cast iron sleeves.
AL—Electric Auto-Lite Co.
Alu—Aluminum.
Bar—Barrel.
Ben—Bendix Aviation Corp.
BM—Bendix or Marvel-Schebler.
Bos—American Bosch Corp.
CMC—Continental Motors Corp.
D—Direct.
DR—Delco-Remy Div.
Ecl—Eclipse Pioneer Div.
EH—Electric motor and hand crank.
Eis—Eiseman Corp.
EM—Electric motor. **FL**—Float.
FL-P—Float, pressure compensated.
HC—Hand crank.
Hor—Horizontally opposed.
IH—In head with push rods and rocker arms.
Inj—Injectors. **Liq**—Liquid.
MS—Marvel-Schebler Carburetor Div.
N—None.
NA—Nickel iron with aluminum head.
OH—Overhead camshaft.
Opt—Optional.
Pen—Pending
P-FL—Pressure injection or float.
PI—Pressure injection.
Rad—Radial.
SA—Steel with aluminum head.
S-A—Scintilla and Auto-Lite.
Scin—Scintilla Magneto Div.
SD—Steel and Dural.
Sim—Simmonds Aerocessories Inc.
SL—Sea level.
Str—Stromberg-Elmira Div.
Ver—Vertically opposed.

Value of Shipments of Aircraft Propellers and Other Products of Their Plants

Based on data from Industry Division, Bureau of the Census

	Value of All Products	Aircraft Propellers and Parts: Total	For Military Aircraft: Total	For Military Aircraft: Propellers	For Military Aircraft: Parts	For Civilian Aircraft: Total	For Civilian Aircraft: Propellers	For Civilian Aircraft: Parts	Other Products and Services	Shipments of Propellers for Civil Aircraft
1958	$230,120,000	$155,125,000	$121,753,000	(d)	(d)	$33,372,000	$22,459,000	$10,913,000	$74,995,000	14,114
1957	250,185,000	162,325,000	120,607,000	$61,589,000	$59,018,000	41,718,000	23,919,000	17,799,000	87,860,000	16,014
1956	185,798,000	118,988,000	87,211,000	40,059,000	47,152,000	31,777,000	17,723,000	14,054,000	66,810,000	12,957
1955	160,531,000	120,034,000	101,907,000	51,127,000	50,780,000	18,127,000	9,313,000	8,814,000	40,497,000	12,611
1954	190,578,000	157,558,000	139,066,000	65,909,000	73,157,000	18,492,000	9,645,000	8,847,000	33,020,000	9,282
1953	213,425,000	188,029,000	168,845,000	100,043,000	68,802,000	19,184,000	10,659,000	8,525,000	25,396,000	9,941
1952	155,348,000	139,344,000	119,746,000	(d)	(d)	19,598,000	10,951,000	8,647,000	16,004,000	10,951
1951	113,104,000	100,089,000	81,195,000	(d)	(d)	18,894,000	9,681,000	9,033,000	13,015,000	10,504

(d)—Not shown separately to avoid disclosing figures of individual companies.

1959 . . . U.S. AND FOREIGN MILITARY AIRCRAFT

				ENGINE						DIMENSIONS (Ft. & In.)					WEIGHTS (Lb.)				PERFORMANCE				
MAKE AND MODEL	POPULAR NAME	Type	Number of Crew	Make and Model	Number Used	Total Take-off Hp. at Specified RPM	Total Take-off Thrust at Specified RPM	Fuel Capacity (Gallons)	Oil Capacity (Gallons)	Span	Overall Length	Height (Taxi Position)	Wing Area (Gross) Sq. Ft.	Aileron Area (Sq. Ft.)	Empty	Useful Load	Gross	Pay Load	Maximum Speed at Altitude	Cruising Speed at Altitude	Range in Miles at Cruising Speed	Initial Climb (Feet per Minute)	Service Ceiling with Normal Load (Feet)
UNITED STATES																							
Beech 45	Mentor T-34A	T	2	Cont O-470-13	1	225 2600	N	50	3	32'10"	25'11"	9'7"	177.6	11.5	2170	776	2950		187 SL	170 10000	727	1120	18200
45	Mentor T-34B	T	2	Cont O-470-4	1	225 2600	N	50	3	32'10"	25'11"	9'7"	177.6	11.5	2233	777	3000		187 SL	170 10000	727	1120	18200
L-23D	Seminole	L, Tr	6	Lyco O-480-1	2	680 3400	N	230	8	45'3 3/8"	31'6 11/32"	11'4"	277.1	13.9	4460	2022	7000		240 9000	254 14800	1650	1620	25500
Boeing B-52	Stratofortress	HB	6	P&W J-57	8	N	80000			185'0"	156'0"	48'0"					400000[1]		650[1]		6000[1]		50000[1]
KC-135	Stratotanker	Ta, TC	4	P&W J-57	4	N	40000			130'10"	136'3"	38'5"					250000[1]		600[1]	550	4000[1]		42000[1]
B-52G	Stratofortress	HB	6	P&W J-57-P-43W	8	N	80000[1]			185'0"	157'7"	40'8"					400000[1]		650[1]		6000[1]		
Cessna TL-19D	Bird Dog	OR, IT	1	Cont O-470-15	1	213 2600	N	42	2 1/2	36'0"	25'0"	7'6"	174.0	18.3	1700	700	2400			129 5000	380	1100	18500
OE-2	N	L	1	Cont SO-475-2	1	265 2600	N	51	4	36'0"	25'2"	7'6"	174.0		1835	815	2650	473	161 10000	132 5000	500		22350
T-37A	N	T	2	Cont J-69-T9	2	N	1840 22700	317	3	33'9 11/32"	27'7 3/8"	9'4 11/64"	183.9	11.4	3911		6451		339 35000	294 35000	700	2700	36600
L-27A	N	L	1	Cont O-470-M	2	480 2600	N	130	6	36'0"	27'0"	10'6"	175.0		3140		4830		232 SL	213 8000			20000
Chance Vought F8U-1	Crusader	F	1	P&W J-57	1	N				35'8"	54'2 3/4"	15'9 1/4"							1000[1]				
F8U-2	Crusader	F		P&W J-57-P-16	1	N				35'8"	54'2 3/4"	15'9 1/4"							(2)				
F8U-3	Crusader III	F		P&W J-75	1	N	26000			39'11 11/32"	58'8 11/32"	16'4 1/2"							(3)				
Convair B-58	Hustler	B	3	GE J-79	4	N				57'0"	97'0"	31'0"							1300[1]				50000[1]
F-106A	Delta Dart	I	1	P&W J-75-P-17	1	N	15000			38'1"	70'8"	20'3"	631.2	66.6					(4)				50000[1]
F-106B	Delta Dart	I	2	P&W J-75-P-17	1	N	15000			38'1 11/64"	70'8 11/32"	20'3 11/64"	631.2	66.6					(4)				50000[1]
Douglas F4D	Skyray	F	1	P&W J-57		N				33'6"	45'5"	13'0"	557.0				20000						
A4D-2	Skyhawk	AB	1	Wr J-65	1	N				27'6"	39'5"	15'0"	260.0				15000						
B-66B	Destroyer	B	3	All J-71	2	N		4650		72'6"	75'2"	23'7"	780.0	32.6	42549		78000		600[1]				
RB-66A, B, C	Destroyer	RB	3	All J-71	2	N		4650		72'6"	75'2"	23'7"	780.0	32.6	43476		70000		600[1]				
C-133A		Tr		P&W T34P-7W	4	6000 11000	N	16000		179'8"	157'6"	48'3"	2673.1	143.3	111235	145583	255000	468000	355	314			28700
A3D-2	Skywarrior	AB	3	P&W J-57	2	N				72'6"	74'5"	22'9"	774.0						700				
WB-66D	Destroyer	W		All J-71	2	N				72'6"	75'2"	23'7"	780.0	32.6					600[1]				
Fairchild F-27	Friendship	Tr	3	RR R.da6/mk511	2	3440 14500	N	1320	7 1/2	95'2"	76'0"	27'6"	754.0	37.6	22237	11207	34520	8887	276 20000	272 20000	1800	1600	38000
Grumman SA-16A	Alabatross	Am,R,C,Tr,P	6	Wr R-1820-76A	2	2850 2700	N	675	58	80'0"	61'0"	24'3"	833.0		20100		27025		270 18800	225	2700	1400	
S2F-1	Tracker	Sub, A	4	Wr R-1820	2	2750	N																
F11F-1	Tiger	F	1	Wr J-65-W-7	1	N				31'7"	40'10"	12'8"											
F9F-8T	Cougar	F, T	2	P&W J-48	1	N				34'6"													
AO-1	Mohawk	O	2	Lyco T-53-L-3	2	1005	N			42'0"	42'9 1/2"												
TF-1	Trader	C, P, U	2	Wr R-1820-82	2		N			69'8"	42'0"	16'3 1/2"											
WF-2	Tracer	EW																					
Lockheed T-33, TV-2		T	2	All J-33	1	N		683[5]		39'0"	38'0"	12'0"	238.0				15000		600				45000
C-130	Hercules	Tr		All T-56	4		N			132'0"	95'0"	38'2"					108000						
P2V-7	Neptune	Pt,M,TB		Wr R-3350-32W[6]	4		7800			103'0"	91'5"	29'4"	1000.0[7]		47450		75500		300				22000
F-104B, D	Starfighter	F	2	GE J-79	1	N				21'11"	54'9"	13'6"											
F-104A, C	Starfighter	F	1	GE J-79	1	N				21'11"	54'9"	13'6"											
T2V-1	Sea Star	T	2	All J-33	1	N		760		42'0"	38'0"	13'0"					16400		600		900		
329	Jetstar	Tr	2	GE J-85	4	N		1640		53'8"	58'10"	20'6"	523.0	24.4	14915	13345	28260	2100	600 45000	525 45000	1720	4000	45000
329	Jetstar	Tr	2	Fair J-83	4	N		1640		53'8"	58'10"	20'6"	523.0	24.4	14915	13345	28260	2100	600 45000	525 45000	1720	4000	45000
329	Jetstar	Tr	2	Wr TJ-37-A1	2	9700	N	1640		53'8"	58'10"	20'6"	523.0	24.4	15139	13681	28820	2100	600 45000	525 45000	1720	4000	45000
Martin P5M-2	Marlin	AS	7	Wr R-3350-32W	2	6500[1]	N	2800		118'0"	101'10"	33'2"	1406.0				74000		250		2200		
YP6M-1	Sea Master	M	4	All J-71	4	N				100'0"	134'0"	31'0"	1900.0				160000	30000	600[1]		2000		40000[1]
McDonnell F-101A	Voodoo	FB	1	P&W J-57	2	N	20000[1]			39'8"	67'5"	18'0"							1200[1]		2000[1]		50000[1]
RF-101A	Voodoo	PR	1	P&W J-57	2	N	20000[1]			39'8"	67'5"	18'0"							1000[1]		2000[1]		50000[1]
F-101B	Voodoo	I	2	P&W J-57	2	N	20000[1]			39'8"	67'5"	18'0"							1000[1]				50000[1]
F3H-2N	Demon	F	1	All J-71	1	N	10000[1]												600[1]		2000[1]		
F4H-1		F, I	2	GE J-79	2	N	30000[1]			38'5"	56'0"								1500				

North American	F-100D	Super Sabre	FB	1	P&W	J-57	1	N		10000				38'0"	47'0"	16'0"							822[1]–				1000[1]		50000[1]
	F-100F	Super Sabre	FB	2	P&W	J-57-P-21	1	N		10000[1]–				39'0"	50'0"	16'0"							1000[1]–				1000[1]		50000[1]
	T2J-1	N	T	1 2	West	J-34-WE-36	1	N		3400		381		38'0"	38'4"	14'0"	255.0	190.0	6500		900[1]		495	25000	417	34700	958	5000	45000
	A3J-1	Vigilante	AB	2	GE	J-79	2	N						50'0"	70'0"	20'0"							Sup						
	T-39-UTX	Sabreliner	T	2			2	N				850		42'5"	43'9"	16'5"	334.0		8153		15330				500	41000	1400		
	F-108		I	1																			(8)						60000[1]
	B-70	Valkyrie				J-93	6	N															(8)						70000[1]
	X-15	N	Rs	1	RM	XLR-99	1	N						22'0"	50'0"	13'0"	200.0				31275		Hyp						EA
Northrop	T-38		T	2	GE	J-85	2	N						25'3"	43'0"	11'11"					10960		Sup				1140		
	F-89D	Scorpion	I	2	All	J-35-A-35	2	N						56'2"	53'4"	17'7"					40000[1]		600				1000[1]		45000[1]
	N-156F		F	1	GE	J-85	2	N													12000		(9)				750		
Piper	L-21B	Grasshopper		2	Lyco	O-290-D2	1	135		N		36	2	35'3"	22'6"	6'7"	178.5	18.8	1000	400	1620	620	127	SL	110	SL	500	1200	20000
Republic	F-105B	Thunderchief	FB	1	P&W	J-75	1	N		15000				34'11"	63'1"	19'8"							(2)						50000[1]
	F-105D		FB	1	P&W	J-75		N		15000				34'11"	63'1"	19'8"													
	F-105E		FB	2	P&W	J-75		N		15000				34'11"	63'1"	19'8"													
Temco	TT-1	Pinto	T	2	Cont	J69-T-2	1	N		920		124	2	29'10"	30'0"	10'10"	150.0	10.4	3139		4400		330	15000	270	22350	277	1900	30000

AUSTRALIA

de Havilland	DH-115, Mk 33	Vampire	T	2	DH	Goblin 35	1	N		3500	10750	396	1½	38'0"	34'6"	6'3"	261.0	7.7	11050		11150		549	20000	408	40000	850	4500	40000

CANADA

Canadair	CL-28	Argus	AS		Wr	981TC 18EA1	4	14800	2900	N				142'3½"	128'3"	36'8"	2075.0	140.4											
	CL-41		T	?	(11)		1	N		(12)		300	¾	36'4"	32'0"	9'4½"	220.0	18.5	4195	2305	6500		463	30000	357	38000	925	4420	45000
de Havilland	L-20A	Beaver	L,Am,C,P	1	P&W	R-985-AN6B	1	450	2300	N		95	6¼	48'0"	30'4"	9'0"	250.0	24.6	2960	2140	5100		163	5000	143	5000	650	1020	18000
	DHC-3	Otter	C,L,Tr,Am,P	1	P&W	R-1340-S1H1-G	1	600	2250	N		216	10¼	58'0"	41'10"	12'7"	375.0	26.3	4370	3629	8000		160	5000	139	5000	1008	1000	19000
	DHC-4	Caribou	Tr	2	P&W	R-2000-7M2	2	2900		N		841	37½	46'0"	68'10"	31'10"	912.0		15000	9188	24000	7180			188	7500	1350	1570	24900

FRANCE

Breguet	765	Deux Ponts	Tr		P&W	CB-16, 17	4			N				141'0"	95'0"	33'6"					122000	38090			250		2500		
	940	Integral	Tr	2	Tur	Turmo II	4	1600		N				58'4"	40'0"						14300				240				
	1050	Alize	AS	3	RR	Dart Mk 21	1	1975	15000	N				51'3"	45'0"	16'5"	387.0				18100		265		150		1550		
	1001	Taon	F	1	Br	Orpheus	1	N							37'0"	12'2"					11200								
	941		FT		GE	T-58	4	4200		N											36000								
Dassault	4-M	Etendard	F, A	1	Sn	Atar 8	1	N		9700				37'4"	47'0"						18000		(13)						
	3-C	Mirage	I, F, A	1	Sn[14]	Atar 9	1	N		13200				27'0"	45'4"		365.0		11640								621		
	B-2	Super Mystere	I, F, A	1	Sn	Atar G	1	N		9700		524		41'0"	54'10"		376.0		15480		20500		(4)				1550		53000
	4-A	Mystere	I, F, A	1	HS	Verdon	1	N		7700		556		36'4"	50'3"		344.0		13000		16512		(13)				356		45000
Fouga	CM-170R	Magister	T, L	2	Tur	Marbore II	2	N		1764	22600	382		37'0"	33'0"	9'0"	186.0		4754		7060		435	SL	407	23000		3150	40000
	CM-175	Esquif	T		Tur	Marbore IIB	2	N		1764				37'0"	33'0"	9'0"	186.0		4755		6976		435	SL				3150	
Holste	MH-1521	Broussard	L, Tr, P	1	P&W	R-985	1	450		N				45'0"			274.0		3373		5511		224		168		747		
Morane-Saulnier	MS-733	Alcyon	T, L	3	Pot	6D	1	230		N				37'0"	30'7"	11'4"	238.0		2830		3856		162	SL	143				
	MS-760	Paris	T, L	2	Tur	Marbore II	2	N		1766	22600	360	3½	31'4"	33'6"	8'6"	194.0		4290		6175		445		390	16400	620	3540	39400
	MS-1500		A, O, L	2	Tur	Bastan	1	650	33000	N				42'10"	34'9"	10'2"	262.0		4190		5890		200		155	8200	745	1700	
Nord	N-2501	Noratlas	Tr	5	Br	Hercules 758, 9	2	4080	2800	1760	22600	1345	70½	106'7½"	72'½"	19'10½"	1089.3	85.7	30048	15367	45415	11385	251	5000	200	9800	1865	1180	23200
Sud-Aviation		Aquilon	F	1 2	DH	Ghost	1	N		4850				42'9"	36'9"	8'10"	280.0		10400	4500	14900		600				1040		49200
	SE-5003	Baroudeur	A	1	Sn	Atar E-4	1	N		8160				32'10"	44'3"	11'10"			10260	4440	14700		742	SL				1585	49000
	SO-4050	Vautour	A	1	Sn	Atar 101E-3	2	N		7720				50'0"	50'0"	15'0"	485.3	38.5	22000	10500	33000		885	SL			610	1100	50000
	SO-4050	Vautour	F, B	2	Sn	Atar 101E-3	2	N		7720		1130		50'0"	50'0"	15'0"	485.3	38.5	22000	10500	44000		685	SL			610	1100	50000
	SO-9050	Trident	I	1	Tur	Gabizo[15]	2	N		9025				22'7"	42'7"	10'6"	156.0		5780		11355							2000	
	SE-117	Voltigeur	GS	2	Tur	Bastan	2	1300		N				54'11"	38'2"										280				
	SE-118	Diplomate	L	2	Tur	Bastan	2	1300		N																			

GREAT BRITAIN

Armstrong Whitworth	AW-650	Argosy	Tr	3	RR	R. Da. 7 2	4	7640	15000	N		3300	15	115'0"	86'9"	27'0"	1458.0	88.0	45350		82000	26000	300	25000	296	22600	800	1200	22600
AVRO	698B, Mk-1	Vulcan	B	5	Br	Olympus	4	N		44000				99'0"	97'1"	26'6"													
	696MR-3	Shackleton	RB	10	RR	Griffon	4			N				120'6"	87'4"	23'4"													
	698B, Mk-2	Vulcan	B	5	Br	Olympus BO1-6	4	N		64000				111'0"	93'4"	27'6"													

For references and abbreviations, see page 229

For Directory of the Aircraft Manufacturers listed above, see Table of Contents

U. S. AND FOREIGN MILITARY AIRCRAFT—*concluded*

MAKE AND MODEL		POPULAR NAME	Type	Number of Crew	ENGINE: Make and Model		ENGINE: Number Used	ENGINE: Total Take-off Hp. at Specified RPM	ENGINE: Total Take-off Thrust at Specified RPM	Fuel Capacity (Gallons)	Oil Capacity (Gallons)	DIMENSIONS (Ft. & In.): Span	DIMENSIONS: Overall Length	DIMENSIONS: Height (Taxi Position)	DIMENSIONS: Wing Area (Gross) Sq. Ft.	DIMENSIONS: Aileron Area (Sq. Ft.)	WEIGHTS (Lb.): Empty	WEIGHTS: Useful Load	WEIGHTS: Gross	WEIGHTS: Pay Load	PERFORMANCE: Maximum Speed at Altitude	PERFORMANCE: Cruising Speed at Altitude	PERFORMANCE: Range in Miles at Cruising Speed	PERFORMANCE: Initial Climb (Feet per Minute)	PERFORMANCE: Service Ceiling with Normal Load (Feet)
GREAT BRITAIN—*cont'd*																									
Blackburn		Beverley	Tr	4	Br	Centaurus 173	4	11400 2800	N	8260	254	162'0"	99'5"	38'9"	2916.0	168.0	82100	52900	135000	45000	238 7500	223 5000	2700	760	15750
	NA-39		A	2	DH	Gyron Junior	2	N																	
	B-107		Tr	4	RR	Tyne	4	N				167'0"	124'0"						175000	58000		352 25000	4000		33000
Bristol	175	Britannia	Tr	9	Br	Proteus 765	4	15840 11775	5040 11775	10304	43	142'3½"	124'3"	37'6"	2075.0	140.0	84850	85150	175000	33000	414 25000	400 25000	6325	1550	33000
deHavilland	DH-115	Vampire	T	2	DH	Goblin 35	1	N	3500 10750	396	1½	38'0"	34'6"	6'3"	261.0	7.7	11050		11150		549 20000	408 40000	850	4500	40000
	DH-110	Sea Vixen	F	2	RR	Avon	2	N				51'0"	53'6½"	14'6"											
English Electric	B-2	Canberra	MB	3	RR	Avon	2	N	13000 7800			64'0"	65'6"	15'7"											
	B-6	Canberra	B	3	RR	Avon	2	N	13000 7800			64'0"	65'6"	15'7"											
	B-8	Canberra	AB	2	RR	Avon	2	N	13000 7800			64'0"	65'6"	15'7"											
	PR-3, PR-7	Canberra	P	2	RR	Avon	2	N	13000 7800			64'0"	66'8"	15'7"											
	T-4	Canberra	T	3	RR	Avon	2	N	13000 7800			64'0"	65'8"	15'7"											
	P-1A		F	1	ArS	Sapphire	2	N																	
	PR-9	Canberra	P	2	RR	Avon	2	N				68'0"	66'8"	15'7"											
	P1-B		F, I	1	RR	Avon	2	N																	
Fairey	AS-1	Gannet	AS	3	ArS	Double Mamba 100	1	N	2950			54'4"	43'0"								300[1]				
	FD-2		Rs		RR	Avon	1	N				26'10"	52'7½"												
	4	Gannet	AS	3	ArS	Double Mamba 100	1	N				54'4"	43'0"	14'0"											
	T-2	Gannet	T	2	ArS	Double Mamba 100	1	N				54'4"	43'0"									185			
	T-5	Gannet	T		ArS	Double Mamba	1	N																	
	AEW-Mk-3	Gannet	EW		ArS	Double Mamba	1	N																	
Folland	FO-141	Gnat	F	1	Br	Orpheus B.Or. 2	1	N	4850			22'2"	29'9"	8'6"	137.0	11.4			6200						50000
	FO-144	Gnat Trainer	T	2	Br.	Orpheus B.Or. 4	1	N	4230			24'0"	30'9"	9'7½"	175.0	12.7			7430						
Gloster	T-3	Javelin	T	2	ArS	Sapphire	2	N	16600			52'0"	60'2"	17'1"	463.5										
	Mk-7, 8	Javelin	F	2	ArS	Sapphire	2	N	16600			52'0"	57'0"	17'1"	463.5										
Handley Page	P-80	Victor	B		ArS	Sapphire	4	N				110'0"	114'11"	26'9"											
	HPR-7	Dart Herald	TC	2	RR	Dart RAA7-527	2	3820	1004	1205	7¼	94'9½"	71'11"	23'4"	886.0	59.4	21422	10160	37000	10160	288 20000	278 17400	1430	1580	29500
	HP-80 Mk-II	Victor	B		RR	Conway	4	N				120'0"	114'11"	26'9"											
Hawker	Mk-6	Hunter	F	1	RR	RA28	1	N				33'8"	45'11"	13'2"	340.0										
	Mk-7, 8	Hunter	F	2	RR	Avon RA21, 28	1	N				33'8"	48'10½"		349.0										
Hunting	P-56	Provost	T	2	Av	Leonides	1	550 3000	N	78	6	35'2"	28'8"	8'10"	214.0	24.2	3311	989	4300		201 2300	177 11500	633	2100	22500
	P-66	Pembroke	Tr	2	Av	Leonides	2	1100 3000	N	286	25	64'6"	46'0"	16'1"	400.0	50.2			13500		220 1800	209	1160	1500	22000
	P-84	Jet Provost	T	2	ArS	Viper V-8	1	N	1750 13800	197		35'2"	31'11"	10'2"	213.7	18.7			6195		316 30000		570	2530	
Saunders Roe	SR-53		I	1	ArS	Viper[16]	1	N				25'1¼"	45'0"	10'10"											
Scottish Aviation	CC-Mk-1	Twin Pioneer	B, Tr	1	Av	Leonides Mk-128	2	1080 3000	N	298	21¼	76'6"	45'3"	12'3"	670.0	25.4	9860	4146	14000	2860	165 1500	125 5000	635	1170	17300
	CC-Mk-1	Pioneer	L, Tr	1	Av	Leonides Mk-130	1	540 3000	N	145	12	49'9"	34'5"	10'2"	390.0	15.0	4200	1600	5800	1015	145 1500	114 5000	585	720	16000
Short	SC-1		Rs	1	RR	RB-08	5	N				23'6"	24'5"												
Vickers-Armstrongs	B-Mk-1	Valiant	MB		RR	Avon	4	N				114'4"	108'3"	32'2"											
	FR-Mk-5	Supermarine Swift	F, Re	1	RR	Avon	1	N				32'4"	42'3"	13'2½"	320.2										
	N-113	Scimitar	F	1	RR	Avon	2	N				37'2"	55'3¼"	16'0"											
ITALY																									
Aer Macchi	MB-323		T	2	P&W	R-1340	1	610 2250	N	106	9¼	39'4½"	30'0"	13'3"	217.0	23.0	4409	1301	5710		210 5900	173 13100	1180	1437	21325
	MB-326		T	2	ArS	Viper AS-V8	1	N	1750 13800	230	2½	32'11"	34'5"	11'3"	204.5	14.3	4299	1984	6283		451 29500	336 30000	826	3051	36089

Fiat	G-46-2B		T	2	DH	Gypsy Queen 30	1	245 2500	N		42	7¼	34'1½"	27'10"	7'10½"	172.2	11.0	2450	700	3150		204 SL	171 10000	700	1060	20000
	G-46-4B		T	2	AR	115 ter Mk-1950	1	222 2400	N		42	7¼	34'1½"	27'10"	7'10½"	172.2	11.0	2425	720	3145		194 SL	164 3400	560	1025	17500
	G-59-4A		T	1	RR	T-24-2 Merlin	1	1400 3000	N		127	9½	38'10½"	31'1"	12'1"	227.0	14.3	6180	1450	7630		380 21000	303 18500	620	3500	39700
	G-59-4B		T	2	RR	T-24-2 Merlin	1	1400 3000	N		100	9½	38'10½"	31'1"	12'1"	227.0	14.3	6285	1180	7465		380 21000	303 18500	500	3500	39700
	F-86-K		F	1	GE	J47GE17 B	1	N	7350				37'2"	40'11"	15'0"	287.9				18000		650		500		45000
	Mk-52	Vampire	F	1	DH	Goblin-3	1	N	3300		395		38'0"	30'9"	6'2"	270.0		6385	3815	10650		480 15000		750		45600
	G-49-1		T	2	Av.Leonides	502/4Mk24	1	570 3000	N		90		40'11"	31'5"	9'1"	255.0		4700	1255	5955		225 3300	185 13100	1500	1050	24000
	G-49-2		T	2	P&W	R-1340-S3H1	1	600 2250	N		90		40'11"	30'10"	9'0"	255.0		4700	1255	5955		230 5000	185 13100	1300	1300	24000
	G-49-3		T	2	IA	19E 1 Indio	1	620 2250	N		90		40'11"	30'10"	8'9"	255.0		4665	1255	5920		230 5000	185 13100	1370	1300	24000
	G-80-3B		T	2	DH	Goblin 35	1	N	3500	10750	405		36'1"	42'5"	13'2½"	270.6	14.3	9500	3300	12800		515 10000	342 30000	620	2420	36000
	G-91		F	1	Br	Orpheus 80302	1	N																		
	G-82		T	2	RR	Nene RN6 21	1	N	5400	12700	465		38'9½"	42'5"	13'4½"	270.6		9700	4080	13780		575 10000	360 30000	715	6100	42650
	G-91-S		F	1	Br	Orpheus 12	1	N																		
	G-91-T		T	2	Br	Orpheus 80302	1	N	5000		530		28'3"	39'4½"	13'11"	176.7		7050	4650	11700		650	450 30000	870		
Piaggio	P-148MT		T	2	Lyco	O-435-A	1	190 2550	N		45	3	36'5"	27'7"	7'10"	200.0	16.4	1931	715	2646		174 SL	127 3000	570	900	18045
	P-149D		T, L	1	Lyco	GO-480-B	1	270 3400	N		63	3	36'6"	28'2"	9'7"	203.0	16.4	2550	1150	3700	700	190 SL	165 7500	620	1100	15500
SPAIN																										
Hispano	HA-100-E1	Triana	T	2	Eliz	B-4	1	775 2200	N		159	7	34'1"	27'9"	11'0"	186.7	15.6	4343	1470	6460		280 9500	237 9500	821	2130	33600
	HA-100-F1		T	2	Wr	957C7BA1	1	800 2600	N		159	9½	34'1"	27'9"	11'0"	186.7	15.6	4510	1470	6627		286 15700	230 15700	910	1620	26200
	HA-200-R1	Saeta	T	2	Tur	Marbore 11A	2	N	1763	22600	185	6½	34'1"	29'1"	10'7"	187.2	11.3	3697		6995		435 35400	362 24600	930	3346	39300
	HA-1112-M1L	Buchon	F, B	1	RR	Merlin 500 45	1	1632	N		88	7¾	38'5"	36'0"	11'5"	172.0		5870		7025		418 12600	248 9850	475	3210	33500
	HA-1112-M4L		T	2	RR	Merlin 500 45	1	1632	N		92½	7¾	38'5"	36'0"	11'5"	172.0		5300		6100		418 12600	248 9850	497	3210	33500
	HA-300			1	Br	Orpheus	1	N																		
SWEDEN																										
SAAB	91B	Safir	T	1	Lyco	O-435-A	1	190 2550	N		46	3	34'9"	26'0"	7'2"	146.0		1580	990	2570		170 SL	169 5000	700	880	19200
	32A	Lansen	F, Re	2	RR	Avon RA-7R	1	N	9500				42'8"	48'0"	15'6"			15400		22200		700[1]				50000
	35	Draken	F	1	RR	Avon 200	1	N	15000				30'10"	46'6"		53.7				20200		(17)			4000	
	32B	Lansen	F	2	RR	Avon RM-6	1	N	15000				42'8"	48'0"	12'3½"	258.0										
	32C	Lansen	Re	2	RR	Avon RA-7R	1	N	9500				42'8"	48'0"	12'3½"	258.0						700[1]				50000
	91D	Safir	T	1	Lyco	O-360-A7A	1	180 2700	N		42½	2	34'9"	26'4"	7'2½"	146.0		1570	1090	2660		168 SL	149 LS	700	985	20000

ABBREVIATIONS

1—Plus.
2—Near Mach 2.
3—Mach 2 plus.
4—Mach 1 plus.
5—With wing tip tanks.
6—Also two Westinghouse J-34 engines.
7—Includes aileron.
8—Mach 3.
9—Mach 1.5.
11—Fairchild J83; General Electric J85; Pratt & Whitney JT12; Rolls Royce RB145 or Armstrong-Siddeley Viper ASV8.
12—1750 to 2450 depending on engine used.
13—Mach 1.
14—Also one S.E.P.R. liquid propellant rocket engine.
15—Also one S.E.P.R. 631 rocket engine.
16—Also one de Havilland Spectre rocket engine.
17—Mach 1.8.
A—Attack.
AB—Attack bomber.
All—Allison Div.
Am—Ambulance.
AR—Alfa Romeo.
ArS—Armstrong-Siddeley Motors, Ltd.
AS—Anti-submarine.
AV—Alvis, Ltd.
B—Bomber.
Br—Bristol Aeroplane Co., Ltd.
C—Cargo.
Cont—Continental Motors Corp.
DH—de Havilland Aircraft Co., Ltd.
EA—Extreme altitude.
Eliz—Elizalde.
EW—Early warning.
F—Fighter.
Fair—Fairchild Engine and Airplane Corp.
FB—Fighter bomber.
FT—Fighter transport.
GE—General Electric Co.
GS—Ground support.
HB—Heavy bomber.
HS—Hispano Suiza.
Hyp—Hypersonic.
I—Interceptor.
IA—Instituto Aeronautico I Ae.
IT—Instrument trainer.
L—Liaison.
Lyco—Lycoming Spencer Div.
M—Mine layer.
MB—Medium bomber.
N—None.
O—Observation.
OR—Observation and reconnaissance.
P—Photographic.
Pot—Potez.
PR—Photo reconnaissance.
Pt—Patrol.
P&W—Pratt & Whitney Aircraft Div.
R—Rescue.
RB—Reconnaissance bomber.
Re—Reconnaissance.
RM—Reaction Motors.
RR—Rolls Royce, Ltd.
Rs—Research.
SL—Sea level.
Sn—S.N.E.C.M.A.
Sub—Submarine search.
Sup—Supersonic.
T—Trainer.
Ta—Tanker.
TB—Torpedo bomber.
TC—Troop and cargo transport.
Tr—Transport.
Tur—Turbomeca.
U—Utility.
W—Weather.
West—Westinghouse Electric Corp.
Wr—Wright Aeronautical Div.

For Directory of the Aircraft Manufacturers listed above, see Table of Contents

U. S. Production of Military Aircraft, by Type

Courtesy of the Aircraft Industries Association

Year	Total	Bombers	Fighters	Transports	Trainers	Other
1940	6,028	1,194	1,689	290	2,731	124
1941	19,445	4,119	4,421	532	9,376	997
1942	47,675	12,634	10,780	1,985	17,632	4,644
1943	85,433	29,362	24,005	7,013	19,942	5,111
1944	95,272	35,008	38,895	9,834	7,578	3,957
1945	46,865	16,502	21,578	4,613	1,309	2,863
1946	1,417	132	1,017	93	......	175
1947	2,122	317	909	98	3	795
1948	2,536	563	1,438	61	73	401
1949	2,592	656	1,316	68	87	465
1950	2,773	560	1,502	176	351	184
1951	5,446	510	2,073	271	621	1,980
1952	9,302	1,226	3,739	512	1,425	2,400
1953	10,626	1,243	4,665	784	1,961	1,973
1954	8,740	1,807	3,518	642	1,602	1,171
1955	8,032	1,378	4,021	534	1,438	661
1956*	6,800	N.A.	N.A.	N.A.	N.A.	N.A.
1957*	5,500	N.A.	N.A.	N.A.	N.A.	N.A.

*—Estimated by Aircraft Industries Association. N.A.—Not available.

1959 ... U.S. AND FOREIGN ROTARY WING AIRCRAFT

MAKE AND MODEL	GENERAL				ENGINE			MAIN ROTOR								ANTI-TORQUE ROTOR					WEIGHTS (Lb.)			PERFORMANCE							LANDING GEAR	
	Number of Seats	Fuel Capacity (Gal.)	Octane Number Recommended	Oil Capacity (Gal.)	Make and Model	Number Used	Rated Hp. at Specified R. P. M.	Number Used	Location	Blades per Rotor	Diameter of Rotor (Ft. In.)	Blade Area (Sq. Ft.)	Type (if more than one used)	Rotor R. P. M. at Cruising Speed	Disc Area (Sq. Ft.)	Number of Blades	Rotor Diameter (Ft. In.)	Blade Area (Sq. Ft.)	Rotor R. P. M. at Cruising Speed	Disc Area (Sq. Ft.)	Gross (Normal Load)	Empty	Useful Load	Max. Speed at Altitude	Cruising Speed at Altitude	Fuel Consumption Cruising Speed (Lb./hr.)	Range (Miles) at Cruising Speed	Rate of Climb: Maximum (Ft./min.)	Rate of Climb: Vertical (Ft./min.)	Service Ceiling Normal Load	Type	Tread—Main Gear
UNITED STATES																																
Bell																																
{ 47G (H-13G) (HTL-6)	3	43	91	2	Frank 6V4-200-C32	1	200 3000	1	C	2	35'1"	35.4		340	969	2	5'8"	2.4	1550	25.6	2350	1434	916	86 SL	70 SL	72	212	780		10900	S	7'6"
47G-2 (H-13H)	3	43	87	2	Lyco VO-435	1	200 3100	1	C	2	35'1"	35.4		340	969	2	5'8"	2.4	1550	25.6	2450	1564	886	100 SL	85 SL		238	805		12300	S	7'6"
47H	3	34	91	2	Frank 6V4-200-C32	1	200 3000	1	C	2	35'1"	35.4		340	969	2	5'8"	2.4	1550	25.6	2350	1499	851	98 SL	90 SL	72	211	820		12000	S	7'6"
47J (HUL-1) (H-13J)	4	34	87	3	Lyco VO-435	1	220 3100	1	C	2	37'2"	34.3		355	1085	2	5'8"	2.4	1600	25.6	2850	1615	1235	105 SL	99 SL		222	630		9025	S	7'6"
61	4	425	145	28	P&W R2800-50	1	1900	2	Tan	2	51'6"	138.0			4166						16700	12700	4000								Qua	
200	2	103	91	7	P&W R985	1	450	2	Tan	3	25'0"				982						4700	3490	1210								S	4'0"
204 (HU-1)	6	125		3	Lyco LTC1B-1	1	770 6400	1	C	2	44'0"	27.5			1520	2	8'6"	3.0		56.0	5725	3825	1900	142 SL	115 SL			1000	1420	15300	S	8'4½"
47K (HTL-7)	2	34	97	1½	Lyco O-435-6	1	220 3100	1	C	2	37'2"	34.3		355	1085	2	5'8"	2.4	1600	25.6	2565	1916	649	103 SL	90 SL		198	810		13560	S	7'6"
Bensen B-7M	1	6	80		Nel H-59A	1	42 4000	1	C	2	20'0"			400							450	185	265	75 SL	60 SL		120	950		12500	Tri	5'0"
B-8M	1	6	100		McC 4318-E	1	72 4100	1	C	2	20'0"			420							500	247	253	85 SL	60 SL		100	2000		16500	Tri	5'0"
Brantly B-2	2	30	91	1½	Lyco VO-360-A1A	1	180 2900	1	C	3	23'8¼"	23.9		470	445	2	4'3"				1600	960	640	100[1]	100		300	1350		9750	S	5'8¼"
Cessna CH-1C	4	60	91	3	Cont FSO-526-A	1	270 3200	1		2	35'0"	37.9		367	962	2	7'0"	3.10	1636	38.5	3100	2067	1033	124 8000	100[1]	120	285	950	150	15550	S	8'4"
YH-41	4	60	91	3	Cont FSO-526-A	1	270 3200	1		2	35'0"	37.9		367	962	2	7'0"	3.10	1636	38.5	3000	2132	868	124 8000	100[1]	120	290	1030	440	16100	S	8'4"
Convertawings A	1	12	80	½	Cont C-90	2	90	4	Sq	2	19'5"	45.2	Int	550	1182	N					2300										Tri	
Doman LZ5-5	8	119	100	7	Lyco GSO-720-A1A	1	520 3400	1	C	4	48'0"	73.6		205	1810	3	10'0"	6.2	1000	78.5	5500	3250	2250	115 SL	107 10000	186	390	850		10500	QT	7'6"
YH-31	8	119	100	7	Lyco GSO-720-A1A	1	520 3400	1	C	4	48'0"	73.6		205	1810	3	10'0"	6.2	1000	78.5	5200	3387	1813	76 1500	76 1500	124	310	850		9100	QT	7'6"
Goodyear GCA400R-3	1	4	80	⅛	OMM RDHE	1	38 5000	1	C	2	20'0"	11.6		480	314	2	3'6"	1.5	2400	9.6	490	290	200	63 SL	46 SL	29	35		500	8000	S	5'0"
Gyrodyne XRON-1	1	5			Por GP-702-1	1	62 4000	2		2	17'0"	14.0	CA	640	227						688	408	280	69 SL	52 SL	23½	60	610	500	6500	Tri	5'4"
Hiller H-23D	3	46	91	3⅓	Lyco VO-435-A1C	1	250 3200	1	C	2	35'4"	33.8		359	980	2	5'6"	2.7	2230	23.8	2700	1773	927	95 SL	82 SL	90	197	1050	590	13200	S	7'6"
XRDE-1	1	2½	87	¼	Nel H-23B	1	43 4000	1	C	2	18'6"	8.6		541	271	2	3'0"	.9	3250	7.1	556	300	256	70 SL	52 SL	26½	27	1160	680	13200	Tri	8'4"
12E	3	46	87	2¼	Lyco VO-540-A1A	1	305 3200	1	C	2	35'4"	33.8			980	2	5'6"	2.7		23.8	2700	1700	1000	95 SL	82 SL		185	1550		15500	S	7'6"
X-18					All[2] T-40	2	5035														33000										Tri	
Hughes 269A	2	25			Lyco O-360	1	180 2700	1	C	3	25'0"	21.1		450	491	2	3'4"	1.0	4138	8.7	1550	890	660	90	75	65	150	1100	400	11000	S	6'0"
Kaman H-43A	5	100	100		P&W R-1340-48	1	600	2		2	47'0"	122.9	Int	240	1901						5800	4040	1760	95 8000	65		220	1300	800	18000	Qua	8'2"
H-43B	8	200	JP4	2	Lyco T53-L-1A	1	860 6680	2		2	47'0"	122.9	Int	235	1931						5870	4278	1592	104 SL	98 SL	430	184	2000	1540	25700	Qua	8'4"
HU2K	6	276	JP4		GE YT-58-6	1	1024 6000	1		4	44'0"					3	8'0"				7378	5052	2326								Tri	10'10"
McDonnell XV-1	4	90	145	6	Cont R-985-19	1	525 2600	1	C	3	31'0"	68.0		400	750	4	1'3"	.3	0	1.2	5505	4277	1228	170 SL	138 SL	380		1300	300		S	4'8"
120	1	212	JP4		AR[3] GTC 85-36	3	740	1		3	31'0"	68.0		415	750	N					5000	2450	2550	138 SL	109 SL	1000	98	2400	1500	17500	S	9'2"
Omega BS-12	5	80	91	4	Frank 6AS-335	2	225 3100	1	C	4	39'0"	50.5		320	1195	2	7'3"	2.92	1340	41.3	4750	3150	1600	85 SL	75 SL	144	200	800	160	13800	Tri	12'10"
Piasecki V2-8P	3		90		Lyco O-360	2	180 2700	2	Tan	3			Tan																		S	
Republic[4] Alouette II	5				Tur Artouste II B-1	1	400	1	C	3	23'6"										3300	1874	1426	110	100		345	1000		20000	S	6'10"
Sikorsky S-55C	12	185	80	9½	P&W R-1340	1	600 2250	1	C	3	53'0"			194	2206	2	8'9"		1360	59.1	7200	4950	2250	101 SL	85	228	400	700		10500	Qua	11'0"
S-58B	20	198	145	10½	Wr R-1820-84	1	1525 2800	1	C	4	56'0"			224	2460	4	9'4"		1330	68.7	13000	7630	5370	123 SL	98	528	192	1075	400	9500	Conv	12'0"
S-56	36	400	145	40	P&W R-2800	2	2100 2700	1	C	5	72'0"			85	4080	4	15'0"		840	177.0	31000	20690	10310	130 SL	115			990		8700	Conv	19'9"
S-55A	12	185	91	9½	Wr R-1300	1	800 2600	1	C	3	53'0"			194	2206	2	8'9"		1360	59.1	7500	5250	2250	112 SL	91 SL	258	360	1020	100	10600	Qua	11'0"
S-60	2				P&W R-2800	2	2100 2700	5	C							4	72'0"			4060.0	31200	9000	12200	130 SL	115					10800	Tri	
S-61					GE T-58-GE-6	2	1050 19500	1	C	5						5															Tri	
S-62	12	182	JP4		GE T-58-GE-6	1	1050 19500	1	C	3	53'0"				2206	2	8'9"			59.1	7500	4550	2950	117 SL	98 SL	410	230	1160		15700	Tri	11'0"
Vertol H-21B	22	300	100		Wr 1820-103	1	1425 2700	2	Tan	3	44'0"		Tan			N					13500	8600	4700	130 SL	98 5000		370	1100[1]	900[1]	10000	Tri	
H-21C	22	300	100		Wr 1820-103	1	1425 2700	2	Tan	3	44'0"		Tan			N					13500	8730	4570	130 SL	98 5000		370	1100[1]	900[1]	10000	Tri	
44	15-19	300	100		Wr R-1820-103	1	1425 2700	2	Tan	3	44'0"		Tan								14300	8980	5420	127 SL	102 SL		399			10600		
107 (YHC-1)	25									3	48'4"		Tan								15550											

FRANCE

Sud-Aviation	SE-3130	5				Tur	Artouste II	1	390	34000	1	C	3	33'6"	320		2		320		3300	1874	1426	113	SL	106			375	1180	15100	S	
	SO-1221	2	66		2	Tur	Palouste IV	1	250	34000	1	C	2	36'0"		1022	N				1764	794	970	81	SL	62	SL	198	112	500	14000	S	8'5"
	S-58					Wr	C-9	1	1525	2800				56'0"							12700	7560	5140	130	SL	88			225	1075	9600		

GREAT BRITAIN

Bristol	171	5-6	107		6½	Av	Leonides	1	52[illegible]	3000				48'6¼"		1860					5600	3983	1617	126	SL	104	2000	174	368	1220	15500		
	192		672		12	Nap	Gazelle	2	1840					48'8"							18000	10553	7447	138	5000	115	5000		445	1500	17500		
Fairey	Rotodyne	42-50				Nap	Eland N.E. 17	2	7000	12500				46'6"		475					39000	23400	15600			185	3000	2100	400	1670			
	Ultralight	2				Bl	Palouste	1						32'2"							1800	985	820	105	1000	98	1000		90	1350			
Saunders-Roe	Mk-12	2	23		3	DH	Gypsy Major 215	1	215	2850				32'0"							2300	1646	410	101		99			235	1150	12800		
	P-531	5			1	Bl	Turmo 600	1	425					32'6"							3950	2238		120	SL	115	SL	465	260	1200	13000		
Westland	Whirlwind	10-12	175	87	12	P&W	R1340-40	1	600	2250	1	C	3	53'0"		2210	2			63.5	7800	5375	1054	95		80			331	1200	15800	Qua	11'3"
	Whirlwind	10-12	175	130	12	Av	Leonides Major 755	1	750		1	C	3	53'0"		2210	2			63.5	7800	5375	1054	95		86			331	1200	15800	Qua	11'3"
	Widgeon	7	100	130	7¾	Av	Leonides 521 2	1	515	3000	1	C	3	49'2"		1880	2			56.3	5900	6322	635	95		88			296	780	11800	Tri	12'0"
	Wessex	25-29	362			Nap	Gazelle N.G.A. 13	1	1450		1	C	4	56'0"		2456	4	9'4"		70.0	12600	7600	1892	125	SL	100			398	1760	14200	Tri	12'0"
	Westminster	46-53	1110			Nap	Eland N.El.-6	2	3650		1	C	5	72'0"		4050	4	15'0"		176.0	33000	21245	11355			130			445	2350	16800	Tri	19'9"

ABBREVIATIONS

1—Plus
2—Also one Westinghouse J34 engine.
3—Plus three McDonnell pressure jets.
4—Built under license from Sud-Aviation.
All—Allison Div.

AR—AiResearch.
Av—Alvis, Ltd.
Bl—Blackburn & General Aircraft, Ltd.
C—Center.
CA—Co-axial.
Cont—Continental Motors Corp.

Conv—Conventional.
DH—de Havilland Aircraft Co., Ltd.
Frank—Franklin (Air cooled Motors).
GE—General Electric Co.
Int—Intermeshing.
Lyco—Lycoming-Spencer Div.

McC—McCullough.
N—None.
Nap—Napier.
Nel—Nelson.
OMM—Outboard Marine & Mfg. Co.
Por—Porsche.

P&W—Pratt & Whitney Aircraft Div.
QT—Quadracycle and tail skid.
Qua—Quadracycle.
S—Skid.
SL—Sea Level.
Sq—Square.

Tan—Tandem.
Tri—Tricycle.
Tur—Turbomeca.
Wr—Wright Aeronautical Div.

For Directory of the Aircraft Manufacturers listed above, see Table of Contents

Estimated Sales of Outboard Motors, and Number in Use, by States

Compiled jointly by National Association of Engine & Boat Mfrs. and Outboard Boating Club of America

State	Unit Sales 1958	Unit Sales 1957	No. in Use Dec. 31, '58
Alabama	8,700	8,100	83,000
Arizona	2,000	1,700	18,000
Arkansas	6,300	4,900	50,000
California	37,300	36,700	357,000
Colorado	3,400	2,500	19,000
Connecticut	9,100	9,500	87,000
Delaware	1,900	2,000	15,000
District of Columbia	2,100	2,500	30,000
Florida	26,300	24,500	261,000
Georgia	8,500	8,200	86,000
Idaho	2,400	2,500	21,000
Illinois	29,500	32,200	332,000
Indiana	13,100	15,500	160,000
Iowa	11,300	9,500	99,000
Kansas	6,400	6,100	50,000
Kentucky	5,900	5,500	56,000
Louisiana	11,300	10,800	115,000
Maine	6,700	6,100	54,000
Maryland	9,800	8,200	81,000
Massachusetts	16,500	16,600	168,000
Michigan	32,100	38,000	407,000
Minnesota	20,900	25,800	245,000
Mississippi	3,100	3,000	36,000
Missouri	15,700	13,500	139,000
Montana	2,400	2,200	19,000
Nebraska	4,200	3,100	28,000
Nevada	1,000	900	7,000
New Hampshire	3,300	3,200	29,000
New Jersey	16,500	16,800	169,000
New Mexico	1,000	1,500	9,000
New York	50,300	50,200	514,000
North Carolina	8,400	7,500	78,000
North Dakota	2,400	2,500	21,000
Ohio	25,700	27,400	305,000
Oklahoma	8,300	8,900	79,000
Oregon	8,800	8,500	80,000
Pennsylvania	16,700	19,500	182,000
Rhode Island	3,500	2,600	30,000
South Carolina	5,800	5,400	49,000
South Dakota	2,400	1,900	19,000
Tennessee	10,500	10,600	101,000
Texas	28,100	27,800	295,000
Utah	2,700	2,700	20,000
Vermont	1,500	1,100	14,000
Virginia	7,900	8,100	85,000
Washington	18,700	18,300	183,000
West Virginia	2,500	2,500	22,000
Wisconsin	21,400	22,400	211,000
Wyoming	700	700	7,000
Total	545,000	550,000	5,525,000

1959 . . . U.S. AND FOREIGN CIVIL AIRCRAFT

Make and Model	Type	A. T. C. Number	Number of Crew	Number of Seated Passengers	Engine: Make	Engine: Model	Engine: Number Used	Engine: Total Take-off Hp. at Specified RPM	Fuel Capacity (Gal.)	Oil Capacity (Gal.)	Dimensions: Span	Dimensions: Overall Length	Dimensions: Height (Taxi Position)	Dimensions: Wing Area (Gross) Sq. Ft.	Dimensions: Aileron Area (Sq. Ft.)	Weights: Empty	Weights: Useful Load	Weights: Gross	Weights: Pay Load	Performance: Maximum Speed at Altitude	Performance: Cruising Speed at Altitude	Performance: Range in Miles at Cruising Speed	Performance: Initial Climb (Ft. per Min.)	Performance: Service Ceiling with Normal Load (Ft.)	Performance: Fuel Consumption at Cruising Speed (Lb. per Hr.)
UNITED STATES																									
Acme A-1	ET-LS		1	7	Cont.	Turbofan 420	2	2500[1]	660	8	46'0"	38'0"	11'6"	260.0	36.0	4115	4885	9000	2200	450	400	1500	2000	25000	800.0
Bee Aviation Honey Bee	P-L	4A11	1	N	Cont.	A-65	1	65	8½	1	28'0"	18'0"	7'8"	96.0	5.4	610	250	860	200	120	110	240	1000	15000	24.0
Wee Bee	P-L	X	1	N	Kie	O-45-35	1	30	2½		18'0"	15'0"	3'0"	44.0	2.2	210	210	410	200	82	72	50	300	9000	20.0
Queen Bee	P-L	X	1	3	Lyco	O-320	1	150	42	1	32'10"	22'1"	8'0"	130.0	5.8	1190	960	2150	840	170	160	700	1000	18000	48.0
Beech D-50B	PC-L	5A4	1	5	Lyco	GO-480-G2D6	2	590-3400	180	6	45'3⅛"	31'6½"	11'4"	277.1	13.9	4090	2210	6300		214-2500	203-7000	1650	1450	20000	
E-18S	PC-L	A765	1-2	6	P&W	R-985AN-14B	2	900-2300	318	16	49'8"	35'2½"	9'6"	361.0	17.5	6050	3250	9300		234-3300	215-10000	1626	1490	25700	
G50	PC-L	5A4	1	5	Lyco	1GSO-480-A1A6	2	680-3400	230	8	45'3⅛"	31'6½"	11'4"	277.1	13.9	4443	2207	7150		240-12000	228-15200	1720	1320	28300	
95	PC-L	3A16	1	3	Lyco	O-360-A1A	2	360-2700	112	4	37'10"	25'4"	9'6"	193.8	11.5	2570	1430	4000		210-SL	200-7500	1410	1360	19300	
K-35	P-L	A777	1	3	Cont.	10-470-C	1	250-2600	68	2½	32'10"	25'2"	6'6½"	177.6	11.5	1832	1118	2950		210-SL	200-7000	1245	1170	20000	
MS-760	ET-L	7A3	1	3	Tur	Marbore IIC	2	1660[1]-22600	370	3¼	33'3"	32'11"	8'6"	194.0	15.3	4487	3013	7500		415-18000	341-15000	933	2400	25000	
Boeing 707-120	PC-L		3	124-150	P&W	JT3C-4	4	40000[1]	17400		130'10"	134'6"	38'7"	2433.0				248000	42700		591	3000[2]		40000[2]	
707-220	PC-L			124-150	P&W	JT4A	4		18078		130'10"	134'6"	38'7"	2433.0				248000	42000		605			40000[2]	
707-320	PC-L		4	131-162	P&W	JT4A	4	50000[1]	23580		141'6"	146'8"	38'8"	2908.0				296000	40000		605	4000[2]		40000[2]	
707-420	PC-L		4	131-162	RR	Conway Mk-505	4	66000[1]	23580		142'5"	152'11"	38'8"	2900.0				296000	40000		606	4000[2]		40000[2]	
720	PC-L		3	110-130	P&W	JT3			10092		130'10"	128'10"	38'7"	2433.0				203000	33000		600[2]	2400[2]		40000[2]	
Call Air A-5	DS-L	A758	1	1	Lyco	O-320-A2A	1	150-2700	25	2	35'5¼"	24'7⅛"	7'10"	186.1	11.8	1020	1130	2150	850	105-7000	100	300	810	15000	48.0
A-6	DS-L	A758	1	1	Lyco	O-360-C1A	1	180-2700	40	2	35'5¼"	24'7⅛"	7'10"	186.1	11.8	1170	1180	2350	850	115-7000	105-7000	400	1000	17300	63.5
Cessna 172	PC-L	3A12	1	3	Cont.	O-300-A	1	145-2600	42	2	36'0"	25'0"	8'6"	175.0		1260	940	2200		135-SL	124-7500	519	660	13300	
180	PC-LS	5A6	1	3	Cont.	O-470-K	1	230-2600	65	3	36'0"	26'0"	7'6"	175.0		1555	1095	2650		170-SL	160-7500	675	1130	21500	
182	PC-L	3A13	1	3	Cont.	O-470-L	1	230-2600	65	3	36'0"	26'0"	8'6"	175.0		1560	1095	2650		165-SL	155-7500	655	1030	19800	
310-B	PC-L	3A10	1	3-4	Cont.	O-470-M	2	480-2600	100	6	36'0"	27'0"	10'5"	175.0		2965	1735	4700		232-SL	213-8000	850	1660	20500	
150	PC-L	3A19	1	1	Cont.	O-200-A	1	100	26	1½	33'4"	21'0"	6'11"	160.0		962	538	1500		124-SL	121-9000	520	740	15300	
175	PC-LS	3A17	1	3	Cont.	GO-300-A	1	175-3200	52	2½	36'0"	25'0"	8'6"	175.0		1312	1038	2350		147-SL	139-10000	595	850	15900	
Skylane	PC-L	3A13	1	3	Cont.	O-470-L	1	230-2600	65	3	36'0"	26'0"	8'6"	175.0		1560	1090	2650		168-SL	158-8000	667	1030	19800	
Champion 7EC, 7FC	PC-LS	759	1-2	1	Cont.	C90-12F	1	95	26	1	35'6"	25'0"	8'0"	340.0	32.0	890	560	1450		122-9000	112-5000	500[2]	1000	15500	30.0
7GC	PC-LS	759	1	1-2	Lyco	O290-D2B	1	140-2800	39½	2	33'5"	22'1"				931	719	1650	482[2]	162-SL	128-7000	492[2]	1040	18100	
7HC	PC-L	759	1	1-2	Lyco	O290-D2B	1	140-2800	39½	2	33'5"	22'1"				952	698	1650	461[2]	162-SL	128-7000	492[2]	1040	18100	
Colonial C-2	ET-LS	1A13	1	3	Lyco	O-360	1	180	40	2	34'0"	23'6"	9'0"	155.0	10.7	1525	825	2350		135-8500	130-8500	520	850	15000	60.0
Convair 880	PC-L		6	88-110	GE	CJ-805-3	4	44800[1]	10770	28	120'0"	129'4"	36'4"	2000.0		84300		184500	23150	615-22500	556-35000	3450	3700	40000	
600	PC-L		6	96-121	GE	CJ-805-21	4		15110	28	120'0"	139'5"	39'6"	2250.0		110750		238200	25120	635-21500	570-35000	4400	3200	40000	
Douglas DC-8 Domestic	PC-L		8	118	P&W	JT4A-3	4		17600		139'9"	150'6"	42'4"	2758.0		122698		265000	33620	561-30000		4060			
DC-8 Intercontinental	PC-L		9	132	P&W	JT4A-3	4		21615		139'9"	150'6"	42'4"	2758.0		130092		287500	35930	589-30000		4490			
DC-8 Tourist Domestic	PC-L		8	144	P&W	JT4A-3	4		17600		139'9"	150'6"	42'4"	2758.0		124977		265000	37910	589-30000		3790			
DC-8 Tourist Intercontinental	PC-L		9	144	P&W	JT4A-3	4		21615		139'9"	150'6"	42'4"	2758.0		128082		310000	37910	591-30000		4360			
DC-8 Tourist Intercontinental	PC-L		9	144	RR	Conway	4		21615		139'9"	150'6"	42'4"	2758.0		128082		310000	37910	591-30000		4360			
Fairchild F-27	PC-L		3	40	RR	RDa6/Mk511	2	3440-14500	1660	7½	95'2"	77'2"	27'6"	754.0	37.6	22325	12078	35700	8778	276-20000	272-20000	1700	1273	33000	1270.0
F-27A	PC-L	7A1	3	40	RR	RDa6/Mk528	2	3980-15000	1660	8	95'2"	77'2"	27'6"	754.0	37.6	22875	11563	35700	8263	300-20000	300-20000	1520	1720	35400	1530.0
Fletcher FU-24	PC-L	4A12	1	4	Cont.	O-470-E	1	225	44	3	42'0"	31'10"	9'4"	294.0	19.6	1960	1520	3500	1210	131-SL	111-SL	420	650	13500	68.4
FU-24	PC-L	4A12	1	4	Cont.	O-470-N	1	240	44	3	42'0"	31'10"	9'4"	294.0	19.6	1990	1490	3500	1190	140-SL	118-SL	415	750	14780	74.5
Goodyear GA-22A	PC-LS	1A12	1	3	Cont.	E-225-8	1	225-2600	60½	3½	37'11"	29'8½"	10'2"	209.0	21.5	1970	1036	3000	820	147-5000	145-5000	800	1050	15500	66.0
GA-468			1		Nelson		1	42	20		22'0"	19'9"	7'0"	110.0		225	200	550	225	72-SL	60-SL	550	6½	10300	19.0
Grumman 159	PE-L		2	10,12,19	RR	DartRDa-7/2	2				78'0"	64'0"						31000			350-25000	2200			
Ag-Cat	Agr		1		Var		1				36'8"	24'4"	10'9"			2177		3750		110			530		

Lockheed	188A	P-L		3	66-99	All	501-D13	4	15000	13820	5360	26	99'0"	104'6½"	32'9 3/16"	1300.0		55993	57007	113000	27000	432		405	22000	2800	2150	32000	4250.0
	329	PC-L		2	10	GE	J-85	4			1640		53'8"	58'10"	20'6"	523.0	24.4	14915	13345	28260	2100	600	45000	525	45000	1710	4000	45000	2000.0
	329	PC-L		2	10	Fair	J-83	4			1640		53'8"	58'10"	20'6"	523.0	24.4	14915	13345	28260	2100	600	45000	525	45000	1710	4000	45000	2000.0
	329	PC-L		2	10	Wr	TJ37A1	2			1640		53'8"	58'10"	20'6"	523.0	24.4	15139	13681	28820	2100	600	45000	525	45000	1710	4000	45000	2000.0
Mooney	20A	P-L	2A3	1	3	Lyco	O-360-A	1	180	2700	49					167.0	11.1	1480	970	2450	120	190	SL	180	7500	1075	1150	20000	
Morrisey	2150	P-L	4A19	1	1	Lyco	O-320-A2A	1	150	2700	35	2	30'0"	21'3"	7'0"	144.0		1125	692	1817	468	148	700	135	700	525	1450	22000²	48.0
North American	T-39	ET-L		2	4-8			2			850		42'5"	43'9"	16'5"	334.0		8153		15330				500	41000	1400			
Piper	PA-18-95	P-L	1A2	1	1	Cont.	C-90	1	90	2475	18	1¼	35'3"	22'4"	6'8"	178.5	18.8	800	700	1500	400	112	SL	100	SL	360	710	15750	30.0
	PA-18-150	P-L	1A2	1	1	Lyco	O-320	1	150	2700	36	2	35'3"	22'0"	6'7"	178.5	18.8	930	740	1750	505	128	SL	113	SL	500	1050	20500	54.0
	Carribbean	P-LS	1A6	1	3	Lyco	O-320	1	150	2700	36	2	29'3"	20'6"	8'4"	147.5	13.2	1100	900	2000	485	139	SL	132	7000	570	620	15000	54.0
	PA-18-150	AU-L	1A2	1	N	Lyco	O-320	1	150	2700	36	2	35'3"	22'6"	6'7"	178.5	18.8	1060	1060	2070	1010	105	SL	90	SL	360	760	17000	54.0
	PA-22-160	P-LS	1A6	1	4	Lyco	O-320B	1	160	2700	36	2	29'4"	20'8"	8'4"	147.5	13.2	1110	890	2000	482	141	SL	134	7000	536	800	16500	54.0
	PA-23	P-L	1A10	1	4-5	Lyco	O-320B	2	320	2700	72	4	37'0"	27'2"	9'6"	204.0	16.7	2230	1570	3800	936	183	SL	171	7000	940	1260	17000	96.0
	PA-24	P-L	1A15	1	4	Lyco	O-360-A1A	1	180	2700	50	2	36'0"	24'9"	7'4"	178.0	14.1	1475	1075	2550	760	167	SL	160	8000	1100	910	18500	60.0
	PA-24	P-L	1A15	1	4	Lyco	O-540-A1A5	1	250	2575	60	3	36'0"	24'11"	7'4"	178.0	14.1	1600	1200	2800	646	190	SL	181	7000	1100	1400	20000	
Stits	SA-9A	P-L	Pend	1	1	Cont.	C90-12	1	95	2625	24	1¼	28'4"	18'7"	6'6"	125.0	6.0	696	554	1250	230	150	10000	135	10000	540	900	16000	27.0
Taylorcraft	400	PC-L	3A3	1	3	Cont.	O-470-J	1	225	2550	66	3	34'8"	24'4"	7'1 11/16"	178.5	14.4	1750	1290	3040	703	160		150	7500	750	900	15000	84.0
	500	PC-L	3A3	1	4	Cont.	O-470-J	1	225	2550	66	3	34'8"	24'4"	7'1 11/16"	178.5	14.4	1800	1240	3040	653	160		150	7500	750	900	15000	84.0
	Seabird	PC-S	3A3	1	3	Cont.	O-470-J	1	225	2550	66	3	34'8"	24'4"	7'1 11/16"	178.5	14.4	2010	1030	3040	443	140		130	7500	650	700	15000	84.0
	Topper	DS-L	3A3	1	N	Cont.	O-470-J	1	225	2550	44	3	34'8"	24'4"	7'1 11/16"	178.5	14.4	1990	1777	3767	1190	120		110	SL	380	600	15000	84.0
Transland	Ag-2	AF-L	4A20	1	1	P&W	R-1340	1	600	2250	125	10	42'0"	28'5"	9'8"	321.0	44.8	3382	2618	6000	2000	141	SL	126	SL	570	950	16000	330.0
Trecker	L2	PC-LS		1	5	Lyco	GSO-480-A1A6	2	680				44'5"	35'6"	13'0"				4630	6614		208	11000	179	10000	994	1279	25400	
BELGIUM																													
Avions Fairey	Tipsy Junior	P-L		1	N	Cont.	A-65	1	65	2300	11¾	⅞	23'1"	18'9¼"	4'5"	114.0	13.8	472	300	772		108	SL	87	SL	326	787	14800	19.0
	Tipsy Belfair	P-L		1	1	WM	11	1	62	2800	16	2	31'0"	21'7"	5'6"	129.0	13.6	606	496	1102		115	SL	93	SL	455	492	16400	19.0
	Tipsy Nipper	P-L		1	N		HEP4	1	40	3500	7½	¾	19'8"	14'9"	5'3⅜"	80.5	4.2	365	297	662		93	SL	80	SL	300	450	10000	16.0
CANADA																													
Canadair	CL-66A	P		3	48	Nap	Eland	2	3500	12500	2032	23	105'4"	79'2"	28'2"	920.0	44.0	32012		53200	13228	325	20000	315	20000	800	1800	20000²	2000.0
	CL-44D	PC-L		7	167	RR	Tyne 12	4	22920	15250	12100	89	142'3⅛"	136'8"	38'7"	2075.0	140.4	97097	115056	205000	62394	347	16000	320	27000	6440	1190	21800	4540.0
de Havilland	DHC-2	PC-LS		1	6-7	P&W	R-985-AN6B	1	450	2300	95	6¼	48'0"	30'4"	9'0"	250.0	24.6	2960	2140	5100	1722	163	5000	143	5000	650	1020	18000	115.0
	DHC-3	PC-LS		1	10-14	P&W	R-1340-S1H1-G	1	600	2250	216	10¾	58'0"	41'10"	12'7"	375.0	26.3	4371	3629	8000	2937	160	5000	139	5000	1008	1000	19000	160.0
FRANCE																													
Breguet	765	PC-L			126-164	P&W	CB-16, CB-17	4					141'0"	95'0"	33'6"					122000	38090			250		2500			
	940	PC-L			21	Tur	Turmo II	4	1600				58'4"	40'0"						14300				240					
	941	PC-L			40	GE	T-58	4	4200²											36000									
Holste	MH-1521	PC-L		1	4	P&W	R-985	1	450				45'0"			274.0		3373		5954		168		137					
Morane-Saulnier	MS-760	P		1	3	Tur	Marbore II	2	1766¹	22600	370	3½	33'3"	33'6½"	8'6"	194.0		4265	3010	7540	560	405	17000	335	23000	920	780	32800	790.0
Nord	N-2502	PC-L		3	45		(4)	4	4080	2800	1345		110'2 11/16"	72'½"	19'10½"	1089.3	85.7	29485	21215	50700	16640	268	5000	195	9800	1710	1230	20700	870.0
	2508	PC-L		3	45		(3)	4	5000⁵	2800	1375	70½	110'2 11/16"	72'½"	19'10½"	1089.3		30980	17425	48500	15660	270	5000	198	10000	1790	1535	26900	
Sud-Aviation	SE-210	PC-L		2-3	64-80	RR	Avon RA-522	2	23400		4890		112'6 11/32"	104'10"	28'6"	1579.0		57950	41260	99210	18300			503	25000	1400	2460		
	SE-118	Lai		2		Tur	Bastan	2	1300																				
GREAT BRITAIN																													
Armstrong-Whitworth	AW-650	PC		3	77	RR	Dart RDa 7/2-526	4	7640	15000	3300	4	115'0"	86'9"	27'0"	1458.0	88.0	45350		82000	26000	300	25000	296	22600	2800	1200	22600	
Blackburn	Universal	PC-L		2-4	200²	Br	Centaurus 873	4	12000	2800	4300	140	162'0"	99'5"	38'9"	2916.0	168.0	81740	61260	143000	50000	242	3600	230	6000	1730	760	15750	2800.0
Bristol	300	P-L		7	101	Br	Proteus 755	4	16480	11940	8036	43	142'3½"	124'4"	36'8"	2075.0	140.0	84172	75828	160000	30000	406	25000	390	25000	4416	1720	32000	4700.0
	310	P-L		9	93	Br	Proteus 755	4	16480	11940	10304	43	142'3½"	124'4"	36'8"	2075.0	140.0	87960	87040	175000	28000	404	25000	385	25000	6200	1500	31000	4800.0
de Havilland	Heron Series 2	PE-L		1-2	8-17	DH	Gypsy Queen 30Mk-2	4	1000	2500	495	18½	71'6"	48'6"	15'7"	499.0		8284		13500	3223			183	8000	680	930	18000	
	Comet 2	P-L		4	44	RR	Avon	4	29400¹		8408		115'0"	96'0"	28'4½"	2036.0				120000	13000			480	40000	2300			
	Dove Series 5 & 6	PE-L		1-2	6-11	DH	Gypsy Queen 70Mk-2	2	760	3000	202	11¼	57'0"	39'3"	13'4"	335.0		5678		8800	1703			179	8000	565	920	20000	
	Comet 4 DH-106	P-L		4	58-76	RR	Avon RA-29	4	42000¹		10840	42	115'0"	111'6"	29'6"	2121.0	120.0			158000	21124			500	40000	2500	3000	36000	
	Comet 4B	P-L		3-5	84	RR	Avon RA-29	4	42000¹	8000	9500	42	108'0"	118'0"	29'6"	2059.0	121.0	75000		156000	22454			532	23500	1900	3000	23500	10300.0
	Comet 4C	P-L		3-5	84-99	RR	Avon RA-29	4	42000¹		10840	42	115'0"	118'0"	29'6"	2121.0	120.0	75000		156000				510	33000	2200	3000	35000	
	DH-121	PC-L		3	95-100	RR	RB-141	3	36000¹				107'0"	125'6"	29'1"							605	30000			1000			

For abbreviations and references, see page 234

For Directory of the Aircraft Manufacturers listed above, see Table of Contents

U. S. AND FOREIGN CIVIL AIRCRAFT—*concluded*

MAKE AND MODEL		Type	A. T. C. Number	Number of Crew	Number of Seated Passengers	ENGINE Make and Model		ENGINE Number Used	ENGINE Total Take-off Hp. at Specified RPM	Fuel Capacity (Gal.)	Oil Capacity (Gal.)	DIMENSIONS (Ft. & In.) Span	DIMENSIONS Overall Length	DIMENSIONS Height (Taxi Position)	DIMENSIONS Wing Area (Gross) Sq. Ft.	DIMENSIONS Aileron Area (Sq. Ft.)	WEIGHTS (Lb.) Empty	WEIGHTS Useful Load	WEIGHTS Gross	WEIGHTS Pay Load	PERFORMANCE Maximum Speed at Altitude	PERFORMANCE Cruising Speed at Altitude	PERFORMANCE Range in Miles at Cruising Speed	PERFORMANCE Initial Climb (Ft. per Min.)	PERFORMANCE Service Ceiling with Normal Load (Ft.)	PERFORMANCE Fuel Consumption at Cruising Speed (Lb. per Hr.)
GREAT BRITAIN—*continued*																										
Handley-Page	HPR-7	PC-L	......	2	36-44	RR	Dart RDA-7-527	2	3820[6]	1205	7¼	94'9"	71'11"	23'4"	886.0	50.4	21422	10160	37000	10160	288 20000	278 17400	1430	1580	29500	1528.0
Hunting	President	PCS-L		1-2	8-12	Av	Leonides 514	2	1100 3000	286	16¾	64'6"	46'4"	16'1"	400.0	50.2			13500		220 1800	167 8000	1110		24000	242.0
	Provost	T-L		2	N	Av	Leonides Mk-2500	1	550	72	6	35'2"	29'0"	8'10"					4250		200 2500	177 11500	633	2100	22500	......
Scottish Aviation	Pioneer	PC-L		1	4	Av	Leonides 503/7	1	540 3000	145	12	49'3"	34'5"	10'2"	390.0	15.0	4200	1600	5800	1015	145 1500	114 5000	585	720	16000	126.0
	Twin Pioneer	PC-L		1	16	Av	Leonides 514/8A	2	1080 3000	298	21¾	76'6"	45'3"	12'3"	670.0	25.4	9960	4380	14000	3120	165 1500	125 5000	635	1170	17300	252.0
	Twin Pioneer	PC-L		1	16	P&W	1340-S1H1-G	2	1200 2250	298	21¾	76'6"	45'3"	12'3"	670.0	25.4	10870	4080	14600	2820	178 4000	134 4500	635	1350	18000	252.0
	Twin Pioneer	PC-L		1	16	Av	Leonides 531/8	2	1230 3200	298	21¾	76'6"	45'3"	12'3"	670.0	50.8	10170	4380	14200	3120	173 2000	130 2500	635	1360	18000	252.0
	Twin Pioneer	PC-L		1	16	Av	Leonides 532/8	2	1230 3200	298	21¾	76'6"	45'3"	12'3"	670.0	50.8	10170	4380	14200	3120	178 4000	134 4500	635	1350	18000	252.0
Vickers-Armstrongs	700-D	PC-L	N	2	40-59	RR	Dart 510	4	6400 14500	2360	19½	94'0"	81'10"	26'9"	963.0	94.8	37070	26000	64500	12000	331 20000	320 20000	2120	1500	30000	2500.0
	800	PC-L	N	2	53-70	RR	Dart 510	4	6400 14500	2330	19½	94'0"	85'0"	26'9"	963.0	94.8	39900	23000	64500	13400	326 20000	316 20000	1950	1500	30000	2500.0
	810	PC-L	N	2	52-70	RR	Dart 525	4	7200 15000	2282	19½	94'0"	85'8"	26'9"	963.0	94.8	41565	29215	72500	14700	366 20000	356 20000	1890	1900	30000	3040.0
	840	P-L	N	2	52-70	RR	Dart 541	4	8400 15000	2282	19½	94'0"	85'8"	26'9"	963.0	94.8	42540	28240	72500	13700	410 20000	394 20000	1730	2150	30000	3620.0
	950	PC-L		2-3	82-139	RR	Tyne 11	4	20120 15250	6125	27½	118'0"	122'10"	34'11"	1529.0	122.0	78575	56485	141000	29000	445 20000	438 20000	3360	2350	30000	5690.0
	790	......		2	54-65	RR	Dart 506	4	5600 14500	2282	19½	94'0"	81'10"	26'9"	963.0	94.8	37280	23220	61500	11542	317 20000	300 20000	1725	1250	25000	2480.0
ITALY																										
Aer Macchi	MB-308	P-L		1	1	Cont.	C-85	1	85 2575	21	1	32'9½"	21'5"	7'2"	147.6	11.8	902	528	1430	528	106 SL	89 SL	470	630	14250	28.6
	MB-308	P-L		1	1	Cont.	C-90	1	90 2475	21	1	32'9½"	21'5"	7'2"	147.6	11.8	902	528	1430	528	110 SL	92 SL	445			30.0
	MB-308-1	P-S		1	1	Cont.	C-90	1	90 2475	21	1	32'9½"	21'8½"	8'9"	147.6	11.8	1035	484	1519	484	105 SL	89 SL	435			
	MB-308-G	P-L		1	2	Cont.	C-90	1	90 2475	23¾	1	32'9½"	21'5"	7'2"	147.6	11.8	946	638	1584	638	108 SL	90 SL	335			32.7
	MB-320	PC-L		1	5	Cont.	E-185	2	410 2600	93	8	42'7½"	28'5"	10'6"	227.1	16.2	3652	904	5500	944	162 SL	136 6500	810	925	14750	116.0
	MB-320	PC-L		1	5	Cont.	E-225	2	450 2600	93	8	42'7½"	28'5"	10'6"	227.1	16.2	3652	904	5500	944	169 SL	143 6500	760	1220	17900	120.0
Nardi	FN-333	P-LS		1	1-3	Cont.	O-470-H	1	240 2600	53	3	34'1"	23'11½"	10'0"	161.4	10.7	2028	948	2976	660	180 SL	166 8000	664	1279	18000	76.5
Piaggio	P-148	P-L		1	2	Lyco	O-435-A	1	190 2550	45	3	36'5"	27'7"	7'10"	200.0	16.4	1950	875	2825		146 SL	124 6500	450	845	14400	58.5
	P-148-MT	T-L		1	1	Lyco	O-435-A	1	190 2550	45	3	36'5"	27'7"	7'10"	200.0	16.4	1931	715	2646		147 SL	127 3000	570	900	18000	58.5
	P-136-L-1	PC-LS	813	1	4	Lyco	GO-480-B	2	540 3400	190	6	44'4½"	35'6"	12'7"	270.0	25.0	4400	1600	6000	935	184 SL	182 8000	990	1180	18500	216.0
	P-136-L-2	PC-LS	813	1	4	Lyco	GSO-480-A1A	2	680 3400	190	7½	44'4½"	35'6"	12'7"	270.0	25.0	4670	1944	6614	935	210 12000	190 13500	935	1280	25500	230.0
	P-149-D	PC-L		1	3-4	Lyco	GO-480-B	1	270 3400	63	3	36'6"	28'2"	9'7"	203.0	16.4	2550	1150	3700	700	190 SL	165 7500	620	1100	16500	108.0
	P-166	PC-L	7A4	1-2	6-7	Lyco	GSO-480-B1C6	2	680 3400	238	8½	46'9"	38'¾"	16'4¾"	285.9	21.3	5004	2712	7716	1498	226 11000	178 15000	1155	1305	27500	160.0
SPAIN																										
C.A.S.A.	201	P-L		3	10	Av	Leonides 503/7Mk-127	2	1080 3000	317	20	60'4"	45'3"	13'0"	450.0		8590	3527	12125	1973	221 7218	190 9843	1305	1063	25600	195.0
	202	P-L		3	14	En	Beta B-IV	2	1550 2200	565	25	70'10"	52'6"	19'11"	618.0		11574	6505	18078	1840	230 9317	205 9843	1087	1024	24000	600.0
	207	P-L		4	30	Br	Hercules 730	2	4080 2800	1236	36¼	91'2"	68'5"	25'5"	924.0		21660	12840	34500	6415	285 6000	236 9840	2425	1398	28200	800.0
	202-B	PE-L		2	8	Wr	R-1820-56	2	2600 2600	862	41¼	67'5"	53'6"	20'9"	603.0	37.2	13384	7889	21273	3088	268 2500	230 10500	1600	1810	24950	658.0
SWEDEN																										
SAAB	91-B	TP-L	......	1	2	Lyco	O-435-A	1	190 2550	46	3	34'9"	26'0"	7'2"	146.0	......	1580	990	2570	......	170 SL	169 5000	700	880	19200	54.0
	91-D	TP-L	......	1	3	Lyco	O-360-A7A	1	180 2700	42½	2	34'9"	26'4"	7'2⅝"	146.0	......	1570	1090	2660	......	168 SL	149 SL	700	985	20000	......

ABBREVIATIONS

1—Pounds of thrust.
2—Plus.
3—Two Pratt & Whitney R-2800-CB17 and two Turbomeca Marbore engines.
4—Two S.N.E.C.M.A. Hercules 758-759 and two Turbomeca Marbore II engines.
5—Plus 1760 lb. thrust at 22600 rpm.
6—Plus 1004 lb. thrust.

AF-L—Agriculture or forestry, land.
Agr—Agricultural.
All—Allison Div.
AU-L—Agriculture or utility, land.
Av—Alvis, Ltd.
Br—Bristol Aeroplane Co.
Cont—Continental Motors Corp.
DH—deHavilland Aircraft Co., Ltd.
DS-L—Duster or sprayer, land.
En—Enmasa.
ET-L—Executive transport, land.
ET-LS—Executive transport, land or sea.
Fair—Fairchild Engine and Airplane Corp.
GE—General Electric Co.
Kie—Kiekhaefer Corp.
Lai—Liaison.
Lyco—Lycoming-Spencer Div.
N—None. **Nap**—Napier.
P—Passenger.
PC—Passenger or cargo.
PC-L—Passenger or cargo, land.
PC-LS—Passenger or cargo, land or sea.
PC-S—Passenger or cargo, sea.
PCS-L—Passenger, cargo or survey; land.
PE-L—Passenger or executive, land.
Pend—Pending.
P-L—Passenger, land.
P-LS—Passenger, land or sea.
P-S—Passenger, sea.
P&W—Pratt & Whitney Aircraft Div.
RR—Rolls Royce, Ltd.
SL—Sea level.
T-L—Trainer, land.
TP-L—Trainer or passenger, land.
Tur—Turbomeca. **Var**—Various.
WM—Walter Mikron.
Wr—Wright Aeronautical Div.

For Directory of the Aircraft Manufacturers listed above, see Table of Contents

PROFITABLE PLUS: PERSONALIZED SERVICE

. . . part of Pennsalt's complete metal preparation service

Let Pennsalt engineers show you how to get best possible metal preparation at lowest cost. Our specialists survey your process, recommend chemicals to fit your needs, help supervise installation and start-up, and follow through with regular service calls to keep your finishing line running at its best. Our nationwide field organization gives you prompt attention, both on scheduled service and in emergencies.

Pennsalt metal processing compounds—a complete line. You can be sure of the right chemicals for the best job at lowest cost, because Pennsalt makes every type of metal cleaner, phosphate coating and drawing compound you'll need. Abundant supply, too, because Pennsalt makes its own basic materials.

Pennsalt machinery . . . designed for savings. Pennsalt custom-engineers a complete line of automatic machines for cleaning, applying deep-draw lubrication, paint bonding, paint stripping and other finishing operations.

. . . a better start for your finish

FOR THE AUTOMOTIVE INDUSTRY

Write for this new folder on Pennsalt metal processing chemicals for the automotive industry.

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ESTABLISHED 1850

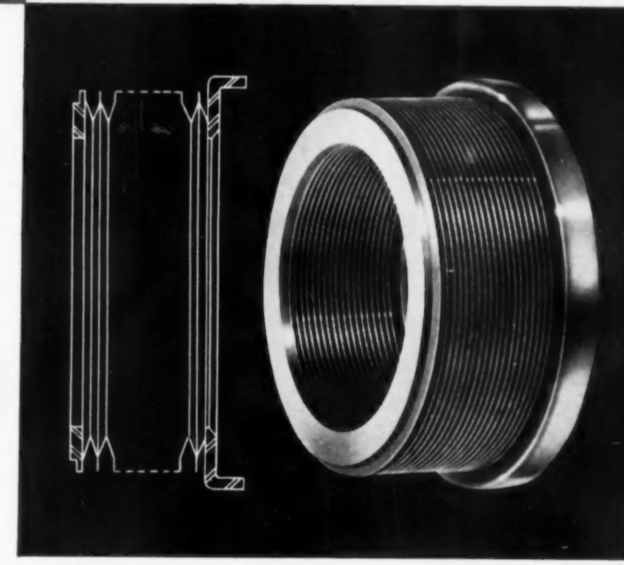
Call or write today for a consultation.

Metal Processing Department 701
PENNSALT CHEMICALS CORPORATION
Three Penn Center, Philadelphia 2, Pa.

Circle 202 on Inquiry Card, for more Data

C/R DESIGN NOTES

How C/R's New Metal Bellows Seal Meets Seemingly Impossible Operating Conditions



Operating Ranges

Temperature	−400° to 1000° F.
Pressure	500 psi
R.P.M.	80,000 plus

These known operating ranges indicate the function of this seal. It is designed for applications where temperatures and mediums to be sealed forbid the use of any organic materials. Typically, these applications include fuel pumps, compressor power units and turbine starters characteristic in rockets and missiles. Other applications include mechanisms which are exposed to a high level of radioactivity.

Design Advantages

The C/R metal bellows seal consists of a metal bellows — a welded homogeneous unit which is secured at one end — and a carrier ring in which the sealing face is mounted. The seal does not contact the shaft. It is stationary, and the only rubbing surfaces are the sealing face and mating ring. These surfaces are precision lapped to provide a positive seal with minimum friction. At any given pressure, the seal can be designed to maintain proper and constantly effective face loads. It orients immediately to run-out and will resist any torques it is subjected to in operation. The design has high end-play tolerance: Chicago Rawhide engineers have deflected a bellows .100 in. for three million cycles at 1750 cpm and at a temperature of 500° F. with no adverse effects.

A further advantage is relatively light weight and compactness. The C/R metal bellows seal can be designed for minimum axial and radial space. Axially, complete seals can be produced within a ¼ in. cross-section. Radially, dimensions are comparable with conventional end face seals.

The C/R metal bellows seal can also be designed with an extremely low coefficient of expansion. The importance of this factor becomes apparent with the fact that in many applications the operating temperature may change hundreds of degrees in a very few seconds.

Mediums To Be Sealed

Virtually any known liquid or gas may be positively sealed with this design, depending upon duration or service life. From a practical viewpoint, the C/R metal bellows seal is the best design for the sealing of cryogenic and high-energy fuels such as LOX, hydrogen peroxide, fluorine and other missile and rocket propellants.

Where possible, lubrication of the two sealing faces is desirable to prolong service life. However, the medium being sealed commonly acts as the lubricant and may be merely hot gas.

Materials

Sealing faces and mating rings for the C/R metal bellows seal are available in a variety of materials including carbons, carbides, ceramics and various alloyed metals for both high temperature and corrosion resistance. The bellows can be furnished in any of several metals and alloys such as stainless steel, Monel, Inconel X, Ni-Span C and other special alloy steels.

Consult C/R Engineers

Each application for the C/R metal bellows seal is essentially a custom-design and an intimate knowledge of all conditions to be encountered must be known by Chicago Rawhide engineers to produce the correct combination of properties in the seal. Then, whether you require five, fifty or five thousand seals, Chicago Rawhide will design and produce the correct seal to solve your problem.

Helpful Design Data:

We will gladly furnish you with a design guide and space envelope data concerning the C/R Metal Bellows Seal. Just write for Bulletin MBS-1 on your company letterhead.

CHICAGO RAWHIDE MANUFACTURING COMPANY

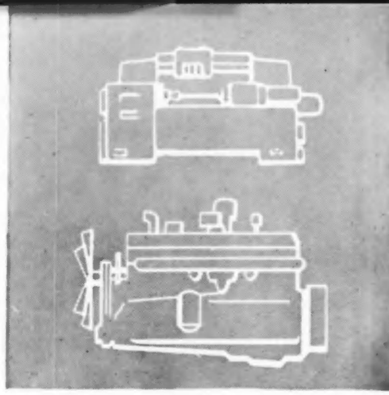
1205 Elston Avenue • Chicago 22, Illinois

Offices in 55 principal cities

In Canada: Chicago Rawhide Mfg. Co. of Canada, Ltd., Brantford, Ontario

Export Sales: Geon International Corp., Great Neck, New York

Circle 201 on Inquiry Card, for more Data



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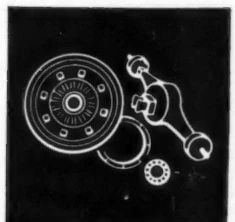
AFFILIATED INDUSTRIES SECTION

AUTOMOTIVE INDUSTRIES STATISTICAL ISSUE

FORTY-FIRST ANNUAL



BUSINESS INDICATORS

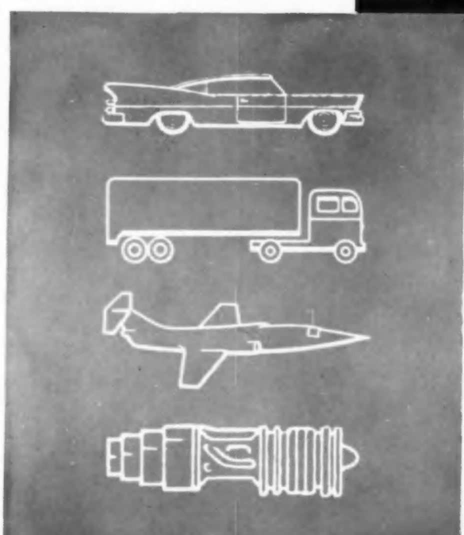
MACHINE TOOLS

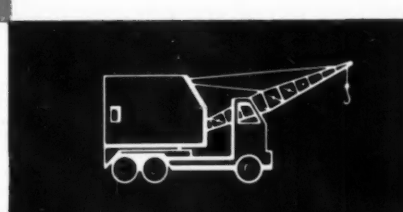
MATERIALS HANDLING

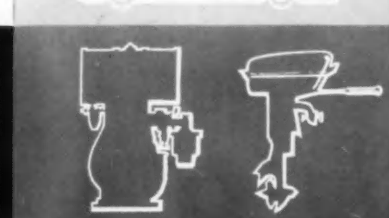
TIRES AND TUBES

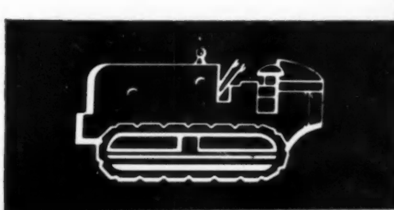
MATERIALS

CONSTRUCTION AND OFF-HIGHWAY EQUIPMENT SPECIFICATIONS









Steam Requirements SLASHED 90% with Cold Bonderite System

50,000 lbs. of steam per hour *before*, 5,000 lbs. per hour *after* installation of Cold Bonderite System!

That's one of many amazing records being made in plants all over the country by this new Parker Rust Proof system.

The switch to Cold Bonderite requires no new equipment, no changes in layout, no new techniques to teach your crew. The specially formulated cleaner and Bonderite simply operate at greatly reduced temperatures, cutting heat requirements by 50 to 90%.

Results? Coatings of traditional Bonderite quality and uniformity with big heat and operating savings.

Nearly a hundred plants, in many industries, are cashing in on Cold Bonderite right now. Get this competitive advantage for *your* plant, too. Call in the Parker man in your territory and begin saving money now!

Temperature gauges tell the story. Special Parco Cleaners and Bonderites in Cold Bonderite System operate 40° to 75° cooler!

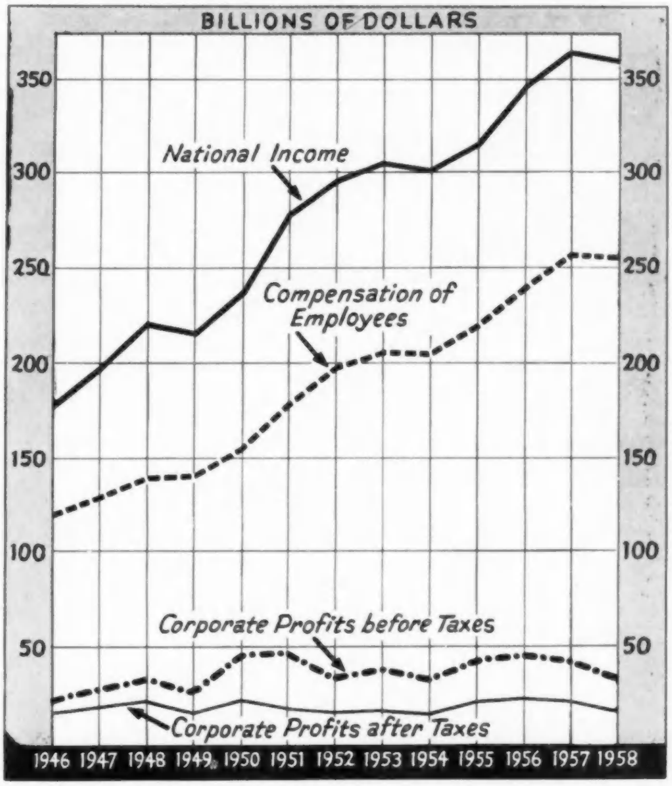
Since 1914 — leader in the field

PARKER RUST PROOF COMPANY
2178 E. MILWAUKEE, DETROIT 11, MICHIGAN

BONDERITE corrosion resistant paint base · **BONDERITE and BONDERLUBE** aids in cold forming of metals · **PARCO COMPOUND** rust resistant · **PARCO LUBRITE** wear resistant for friction surfaces · **TROPICAL** heavy duty maintenance paints since 1883

**Bonderite, Bonderlube, Parco, Parco Lubrite—Reg. U.S. Pat. Off.*

CORPORATE PROFITS DECLINE IN 1958



Purchasing Power of the 1947-1949 Dollar

Office of Business Economics, Department of Commerce

1958	As Measured by Wholesale Prices	As Measured by Consumer Prices
January	84.1	81.8
February	84.0	81.6
March	83.5	81.1
April	83.8	81.0
May	83.7	80.9
June	83.9	80.8
July	83.9	80.7
August	84.0	80.8
September	84.0	80.8
October	84.0	80.8
November	83.9	80.7
December	83.9	80.8
Yearly Averages		
1958	83.9	81.0
1957	85.0	83.2
1956	87.5	86.1
1955	90.3	87.3
1954	90.7	87.1
1953	90.8	87.4
1952	89.6	88.1
1951	87.1	90.1
1950	97.0	97.3
1949	100.8	98.2
1948	95.8	97.3
1947	103.7	104.7

National Income by Selected Distributive Shares 1946-1958

All data are in Millions of Dollars

Office of Business Economics, U. S. Department of Commerce

	National Income	Compensation of Employees	Corporate Profits Before Taxes	Corporate Profits Tax Liability	Corporate Profits After Taxes	Corporate Dividends	Retained Profits	Net Profits as % of Nat. Income
1946	$180,879	$117,697	$22,551	$ 9,111	$13,440	$ 5,784	$ 7,656	7.43
1947	198,177	128,757	29,525	11,283	18,242	6,521	11,721	9.20
1948	223,487	140,969	33,000	12,483	20,517	7,243	13,274	9.18
1949	217,690	140,834	26,370	10,375	15,995	7,473	8,522	7.35
1950	241,876	154,190	40,628	17,865	22,763	9,208	13,555	9.41
1951	279,313	180,327	42,153	22,447	19,706	9,029	10,677	7.05
1952	292,155	195,012	36,691	19,459	17,232	8,954	8,278	5.90
1953	305,573	208,812	38,311	20,222	18,089	9,225	8,864	5.92
1954	301,794	207,595	34,061	17,220	16,841	9,839	7,002	5.58
1955	330,206	223,852	44,862	21,827	23,035	11,215	11,820	6.97
1956	349,356	241,799	45,493	22,422	23,071	12,038	11,033	6.60
1957	363,951	254,637	43,426	21,649	21,777	12,355	9,422	5.98
1958*	360,000	254,000	35,400	17,900	17,500	12,000	5,500	4.86

*—Estimated on basis of returns for first three quarters.

1958 Installment Credit (Short- and Intermediate-Term), End of Month

All data are in Millions of Dollars

As reported by the Board of Governors, Federal Reserve Board

Type of Credit	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Automobile paper	$15,235	$15,030	$14,793	$14,691	$14,613	$14,590	$14,567	$14,514	$14,332	$14,164	$14,066	$14,131
Other consumer-goods paper	8,195	8,277	8,179	8,124	8,158	8,190	8,197	8,254	8,312	8,411	8,528	9,007
Repair and modernization loans	2,069	2,041	2,019	2,017	2,038	2,048	2,061	2,091	2,107	2,128	2,146	2,145
Personal loans	7,914	7,930	7,949	8,056	8,101	8,180	8,249	8,306	8,328	8,349	8,368	8,582
Total—Installment Credit	$33,713	$33,278	$32,940	$32,888	$32,910	$33,008	$33,074	$33,165	$33,079	$33,052	$33,126	$33,865

WAGES

EARNINGS OF PRODUCTION WORKERS—BUREAU OF LABOR STATISTICS

All Manufacturing

	Average Earnings Hourly	Average Earnings Weekly	Real Weekly Earnings‡	Avg. Hours per Week
1958				
Jan.	$2.11	$81.66	$66.77	38.7
Feb.	2.10	80.64	65.83	38.4
Mar.	2.11	81.45	66.06	38.6
Apr.	2.11	80.81	65.43	38.3
May	2.12	82.04	66.37	38.7
June	2.12	83.10	67.18	39.2
July	2.13	83.50	67.39	39.2
Aug.	2.13	84.35	68.19	39.6
Sept.	2.14	85.39	69.03	39.9
Oct.	2.14	85.17	68.85	39.8
Nov.	2.17	86.58	69.88	39.9
Dec.	2.19	88.04	71.17	40.2
Avg.	$2.13	$83.56	$67.66	39.2
1957				
Jan.	$2.05	$82.41	$69.72	40.2
Feb.	2.05	82.41	69.43	40.2
Mar.	2.05	82.21	69.14	40.1
Apr.	2.06	81.99	68.73	39.8
May	2.06	81.78	68.38	39.7
June	2.07	82.80	68.88	40.0
July	2.07	82.39	68.20	39.8
Aug.	2.07	82.80	68.43	40.0
Sept.	2.08	82.99	68.53	39.9
Oct.	2.09	82.56	68.17	39.5
Nov.	2.11	82.92	68.19	39.3
Dec.	2.10	82.74	68.04	39.4
Avg.	$2.07	$82.39	$68.54	39.8

Durable Goods

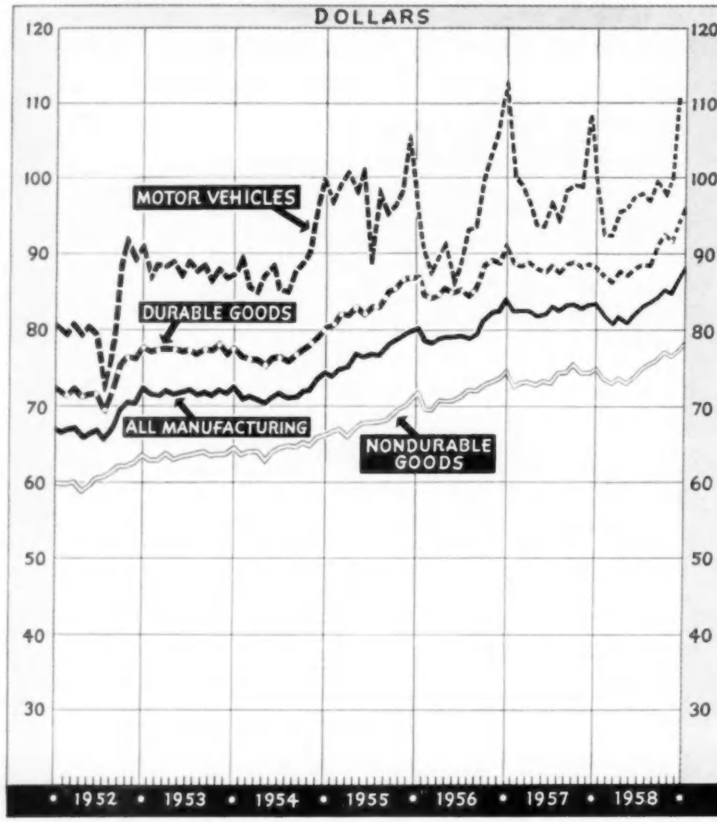
	Average Earnings Hourly	Average Earnings Weekly	Real Weekly Earnings‡	Avg. Hours per Week
1958				
Jan.	$2.24	$87.14	$71.25	38.9
Feb.	2.24	86.46	70.58	38.6
Mar.	2.25	87.75	71.17	39.0
Apr.	2.25	87.30	70.69	38.8
May	2.26	88.37	71.50	39.1
June	2.27	89.89	72.67	39.6
July	2.28	89.83	72.50	39.4
Aug.	2.29	91.14	73.68	39.8
Sept.	2.30	92.46	74.75	40.2
Oct.	2.29	91.83	74.24	40.1
Nov.	2.33	93.90	75.79	40.3
Dec.	2.35	95.65	77.32	40.7
Avg.	$2.28	$90.14	$72.99	39.5
1957				
Jan.	$2.18	$89.16	$75.43	40.9
Feb.	2.17	88.75	74.77	40.9
Mar.	2.18	88.94	74.80	40.8
Apr.	2.18	88.29	74.01	40.5
May	2.18	87.85	73.45	40.3
June	2.19	88.70	73.79	40.5
July	2.20	88.00	72.85	40.0
Aug.	2.21	89.06	73.60	40.3
Sept.	2.22	89.24	73.69	40.2
Oct.	2.23	88.75	73.29	39.8
Nov.	2.24	88.93	73.13	39.7
Dec.	2.24	88.93	73.13	39.7
Avg.	$2.20	$88.66	$73.76	40.3

Motor Vehicles (Incl. Parts)

	Average Earnings Hourly	Average Earnings Weekly	Real Weekly Earnings‡	Avg. Hours per Week
1958				
Jan.	$2.48	$92.50	$75.51	37.3
Feb.	2.48	92.50	75.51	37.3
Mar.	2.50	95.75	77.66	38.3
Apr.	2.50	96.00	77.73	38.4
May	2.51	97.64	79.00	38.9
June	2.51	98.14	79.34	39.1
July	2.51	97.39	78.60	38.8
Aug.	2.54	99.82	80.69	39.2
Sept.	2.55	98.43	79.57	38.6
Oct.	2.52	100.04	80.87	39.7
Nov.	2.70	110.70	89.34	40.9
Dec.	2.75	118.80	96.04	43.2
Avg.	$2.53	$98.06	$79.40	38.8
1957				
Jan.	$2.43	$100.12	$84.70	41.2
Feb.	2.41	99.29	83.64	41.2
Mar.	2.41	97.12	81.68	40.3
Apr.	2.39	93.93	78.73	39.3
May	2.40	94.08	78.66	39.2
June	2.46	97.42	81.05	39.6
July	2.46	94.96	78.61	38.6
Aug.	2.47	98.55	81.45	39.9
Sept.	2.52	99.04	81.78	39.3
Oct.	2.53	99.18	81.90	39.2
Nov.	2.57	107.68	88.55	41.9
Dec.	2.51	100.65	82.77	40.1
Avg.	$2.46	$98.40	$81.86	40.0

‡—Weekly earnings adjusted to Consumers' Price Index.

AVERAGE GROSS WEEKLY EARNINGS



Aircraft and Parts

	1958 Average Earnings Hourly	1958 Average Earnings Weekly	1958 Real Weekly Earnings‡	1958 Average Hrs. per Week	1957 Average Earnings Hourly	1957 Average Earnings Weekly	1957 Real Weekly Earnings‡	1957 Average Hrs. per Week
Jan.	$2.43	$98.66	$80.67	40.6	$2.33	$99.26	$84.98	42.6
Feb.	2.44	98.58	80.47	40.4	2.33	98.56	83.03	42.3
Mar.	2.44	99.06	80.34	40.6	2.35	99.17	83.41	42.2
Apr.	2.44	98.33	79.55	40.3	2.36	99.12	83.08	42.0
May	2.48	100.44	81.20	40.5	2.33	94.60	79.10	40.6
June	2.51	102.16	82.45	40.7	2.34	95.00	79.03	40.6
July	2.54	102.62	82.82	40.4	2.35	94.94	78.59	40.4
Aug.	2.55	104.04	84.11	40.8	2.38	96.15	79.46	40.4
Sept.	2.55	104.04	84.11	40.8	2.38	95.68	79.01	40.2
Oct.	2.57	104.09	84.15	40.5	2.40	96.24	79.47	40.1
Nov.	2.57	104.34	84.21	40.6	2.41	96.16	79.08	39.9
Dec.	2.57	105.11	84.97	40.9	2.44	99.06	81.46	40.6
Avg.	$2.50	$101.49	$82.18	40.6	$2.36	$96.76	$80.50	41.0

Nondurable Goods

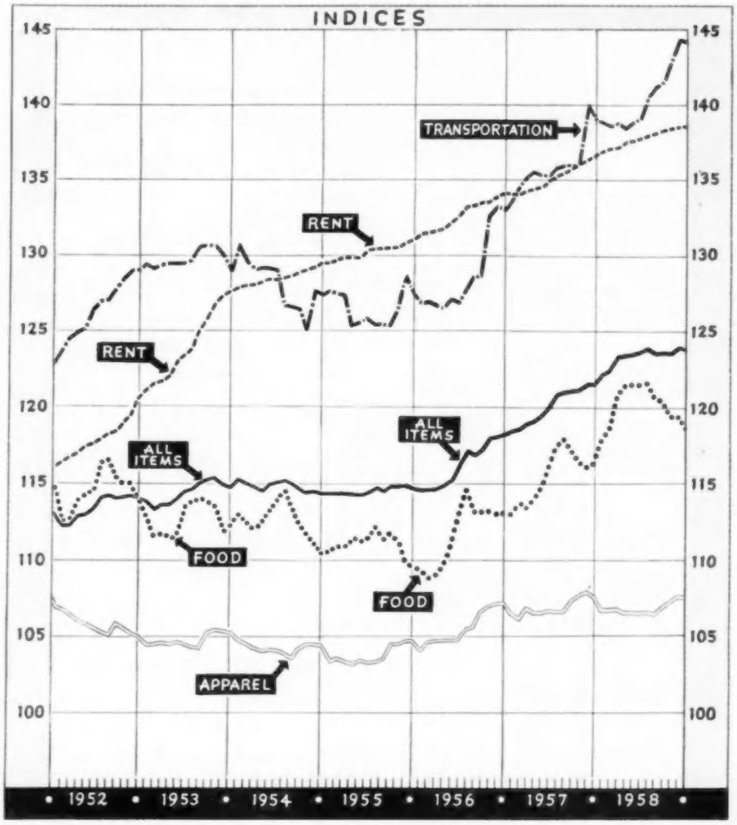
	1958 Average Earnings Hourly	1958 Average Earnings Weekly	1958 Real Weekly Earnings‡	1958 Average Hrs. per Week	1957 Average Earnings Hourly	1957 Average Earnings Weekly	1957 Real Weekly Earnings‡	1957 Average Hrs. per Week
Jan.	$1.92	$73.54	$60.13	38.3	$1.86	$72.73	$61.53	39.1
Feb.	1.92	73.15	59.71	38.1	1.86	72.91	61.42	39.2
Mar.	1.93	73.53	59.63	38.1	1.87	73.12	61.50	39.1
Apr.	1.94	73.14	59.22	37.7	1.87	72.56	60.82	38.8
May	1.94	73.91	59.80	38.1	1.88	73.13	61.15	38.9
June	1.94	75.08	60.69	38.7	1.89	74.09	61.64	39.2
July	1.94	75.66	61.06	39.0	1.89	74.47	61.65	39.4
Aug.	1.93	76.04	61.47	39.4	1.88	74.26	61.37	39.5
Sept.	1.95	77.03	62.27	39.5	1.90	75.24	62.13	39.6
Oct.	1.95	76.83	62.11	39.4	1.90	74.10	61.19	39.0
Nov.	1.96	77.22	62.32	39.4	1.91	74.11	60.94	38.8
Dec.	1.97	78.01	63.06	39.6	1.92	74.88	61.58	39.0
Avg.	$1.94	$75.26	$60.94	38.8	$1.88	$73.51	$61.16	39.1

COST OF LIVING

CONSUMER PRICE INDEX—BUREAU OF LABOR STATISTICS

Based on Monthly Average of 1947-1949 = 100

1958 CONSUMER PRICES UP 2.7%



All Items

	1958	1957	1956	1955
Jan.	122.3	118.2	114.6	114.3
Feb.	122.5	118.7	114.6	114.3
Mar.	123.3	118.9	114.7	114.3
Apr.	123.5	119.3	114.9	114.2
May	123.6	119.6	115.4	114.2
June	123.7	120.2	116.2	114.4
July	123.9	120.8	117.0	114.7
Aug.	123.7	121.0	116.8	114.5
Sept.	123.7	121.1	117.1	114.9
Oct.	123.7	121.1	117.7	114.9
Nov.	123.9	121.6	117.8	115.0
Dec.	123.7	121.6	118.0	114.7
Total ...	**123.5**	**120.2**	**116.2**	**114.5**

Apparel

	1958	1957	1956	1955
Jan.	106.9	106.4	104.1	103.3
Feb.	106.8	106.1	104.6	103.4
Mar.	106.8	106.8	104.8	103.2
Apr.	106.7	106.5	104.8	103.1
May	106.7	106.5	104.8	103.3
June	106.7	106.6	104.8	103.2
July	106.7	106.5	105.3	103.2
Aug.	106.6	106.6	105.5	103.4
Sept.	107.1	107.3	106.5	104.6
Oct.	107.3	107.7	106.8	104.6
Nov.	107.7	107.9	107.0	104.7
Dec.	107.5	107.6	107.0	104.7
Average .	**106.9**	**106.9**	**105.5**	**103.7**

Food

	1958	1957	1956	1955
Jan.	118.2	112.8	109.2	110.6
Feb.	118.7	113.6	108.8	110.8
Mar.	120.8	113.2	109.0	110.8
Apr.	121.6	113.8	109.6	111.2
May	121.6	114.6	111.0	111.1
June	121.6	116.2	113.2	111.3
July	121.7	117.4	114.8	112.1
Aug.	120.7	117.9	113.1	111.2
Sept.	120.3	117.0	113.1	111.6
Oct.	119.7	116.4	113.1	110.8
Nov.	119.4	116.0	112.9	109.8
Dec.	118.7	116.1	112.9	109.5
Average .	**120.2**	**115.4**	**111.7**	**110.9**

Rent

	1958	1957	1956	1955
Jan.	136.8	134.2	131.4	129.5
Feb.	137.0	134.2	131.5	129.7
Mar.	137.1	134.4	131.6	130.0
Apr.	137.3	134.5	131.7	129.9
May	137.5	134.7	132.2	130.3
June	137.7	135.0	132.5	130.4
July	137.8	135.2	133.2	130.4
Aug.	138.1	135.4	133.2	130.5
Sept.	138.2	135.7	133.4	130.5
Oct.	138.3	136.0	133.4	130.8
Nov.	138.4	136.3	133.8	130.9
Dec.	138.7	136.7	134.2	131.1
Average	**137.7**	**135.2**	**132.7**	**130.3**

Medical Care

	1958	1957	1956	1955
Jan.	141.7	135.3	130.7	126.5
Feb.	141.9	135.5	130.9	126.8
Mar.	142.3	136.4	131.4	127.0
Apr.	142.7	136.9	131.6	127.3
May	143.7	137.3	131.9	127.5
June	143.9	137.9	132.0	127.6
July	144.6	138.4	132.7	127.9
Aug.	145.0	138.6	133.3	128.0
Sept.	146.1	139.0	134.0	128.2
Oct.	146.7	139.7	134.1	128.7
Nov.	147.0	140.3	134.5	129.8
Dec.	147.3	140.8	134.7	130.2
Average .	**144.4**	**138.0**	**132.6**	**128.0**

Transportation

	1958	1957	1956	1955
Jan.	138.7	133.6	126.8	127.5
Feb.	138.5	134.4	126.9	127.4
Mar.	138.7	135.1	126.7	127.3
Apr.	138.3	135.5	126.4	125.3
May	138.7	135.3	127.1	125.5
June	138.9	135.3	126.8	125.8
July	140.3	135.8	127.7	125.4
Aug.	141.0	135.9	128.5	125.4
Sept.	141.3	135.9	128.6	125.3
Oct.	142.7	135.8	132.6	126.6
Nov.	144.5	140.0	133.2	128.5
Dec.	144.3	138.9	133.1	127.3
Average .	**140.5**	**136.0**	**128.7**	**126.4**

Wholesale Price Index of Selected Commodities

Bureau of Labor Statistics Index, 1947-49 = 100

1958	All Commod-ities	Farm Products	Proc-essed Foods	Textile Products	Metals and Metal Products	Lumber and Wood Products	Machinery and Motive Products
Jan.	118.9	93.7	109.5	94.6	150.0	116.3	149.4
Feb.	119.0	96.1	109.9	94.1	150.1	115.8	149.3
Mar.	119.7	100.5	110.7	94.0	149.8	115.5	149.2
Apr.	119.3	97.7	111.5	93.7	148.6	115.7	149.4
May	119.5	98.5	112.9	93.5	148.6	115.9	149.4
June	119.2	95.6	113.5	93.3	148.8	116.4	149.5
July	119.2	95.0	112.7	93.3	148.8	116.8	149.5
Aug.	119.1	93.2	111.3	93.3	150.8	118.6	149.5
Sept.	119.1	93.1	111.1	93.3	151.3	120.4	149.4
Oct.	119.0	92.3	110.0	93.2	152.2	120.8	149.9
Nov.	119.2	92.1	109.5	93.1	153.0	120.0	151.2
Dec.	119.2	90.7	108.8	93.2	153.0	119.6	151.5
Average ...	119.2	94.9	110.9	93.5	150.4	117.6	149.8

MONTHLY AVERAGES

1958	119.2	94.9	110.9	93.5	150.4	117.6	149.8
1957	117.6	90.9	105.6	95.3	151.2	119.0	146.1
1956	114.3	88.4	101.7	95.3	148.4	125.4	137.8
1955	110.7	89.6	101.7	95.3	136.6	123.6	128.4
1954	110.3	95.6	105.3	95.2	128.0	118.0	124.6
1953	110.1	97.0	104.6	97.3	126.9	120.2	123.0
1952	111.6	107.0	108.8	99.8	123.0	120.3	121.5
1951	114.8	113.4	111.4	110.6	122.8	123.9	119.0
1950	103.1	97.5	99.8	99.2	110.3	113.9	108.6

POPULATION

Estimated U. S. Population, by States, as of July 1, 1958‡

As reported by the Bureau of the Census, U. S. Department of Commerce

State	Population	% of Total	State	Population	% of Total	State	Population	% of Total
Alabama	3,211,000	1.85	Louisiana	3,110,000	1.79	Ohio	9,345,000	5.39
Alaska*	211,000*	.12	Maine	952,000	.55	Oklahoma	2,285,000	1.32
Arizona	1,140,000	.66	Maryland	2,956,000	1.70	Oregon	1,773,000	1.02
Arkansas	1,766,000	1.02	Massachusetts	4,862,000	2.80	Pennsylvania	11,101,000	6.40
California	14,337,000	8.26	Michigan	7,866,000	4.53	Rhode Island	875,000	.50
Colorado	1,711,000	.99	Minnesota	3,375,000	1.95	South Carolina	2,404,000	1.39
Connecticut	2,316,000	1.34	Mississippi	2,186,000	1.26	South Dakota	699,000	.40
Delaware	454,000	.26	Missouri	4,271,000	2.46	Tennessee	3,469,000	2.00
Dist. of Col.	825,000	.48	Montana	688,000	.40	Texas	9,377,000	5.41
Florida	4,442,000	2.56	Nebraska	1,457,000	.84	Utah	865,000	.50
Georgia	3,818,000	2.20	Nevada	267,000	.15	Vermont	372,000	.21
Idaho	662,000	.38	New Hampshire	584,000	.34	Virginia	3,935,000	2.27
Illinois	9,889,000	5.70	New Jersey	5,749,000	3.31	Washington	2,769,000	1.60
Indiana	4,581,000	2.64	New Mexico	842,000	.49	West Virginia	1,969,000	1.13
Iowa	2,822,000	1.63	New York	16,229,000	9.36	Wisconsin	3,938,000	2.27
Kansas	2,116,000	1.22	North Carolina	4,549,000	2.62	Wyoming	320,000	.18
Kentucky	3,080,000	1.78	North Dakota	650,000	.37	Total	173,470,000	100.00

*—As of July 1, 1957. Later data are not available. ‡—Does not include armed forces overseas, but does include armed forces stationed in each state.

Estimated U. S. Population by Age, Color, and Sex, July 1, 1958*

Bureau of the Census, U. S. Department of Commerce

	All Classes			White			Nonwhite		
Age Groups	Total	Male	Female	Total	Male	Female	Total	Male	Female
Under 5 years	19,505,000	9,936,000	9,569,000	16,730,000	8,544,000	8,178,000	2,775,000	1,392,000	1,383,000
5 to 9 years	18,287,000	9,339,000	8,948,000	15,774,000	8,075,000	7,699,000	2,513,000	1,263,000	1,249,000
10 to 14 years	15,614,000	7,969,000	7,645,000	13,703,000	7,011,000	6,692,000	1,911,000	958,000	954,000
15 to 19 years	12,351,000	6,203,000	6,148,000	10,833,000	5,450,000	5,382,000	1,518,000	752,000	766,000
20 to 24 years	10,567,000	5,144,000	5,423,000	9,245,000	4,505,000	4,739,000	1,323,000	639,000	684,000
25 to 29 years	11,115,000	5,481,000	5,634,000	9,832,000	4,874,000	4,958,000	1,283,000	607,000	676,000
30 to 34 years	12,081,000	5,885,000	6,196,000	10,774,000	5,282,000	5,493,000	1,307,000	603,000	703,000
35 to 39 years	12,140,000	5,913,000	6,227,000	10,907,000	5,333,000	5,575,000	1,233,000	581,000	652,000
40 to 44 years	11,328,000	5,525,000	5,803,000	10,217,000	5,006,000	5,210,000	1,111,000	519,000	592,000
45 to 49 years	10,732,000	5,252,000	5,480,000	9,664,000	4,745,000	4,918,000	1,068,000	507,000	562,000
50 to 54 years	9,362,000	4,597,000	4,765,000	8,490,000	4,171,000	4,319,000	872,000	426,000	446,000
55 to 59 years	8,116,000	3,946,000	4,170,000	7,393,000	3,592,000	3,801,000	723,000	354,000	370,000
60 to 64 years	7,022,000	3,365,000	3,657,000	6,482,000	3,101,000	3,382,000	540,000	265,000	275,000
65 to 69 years	5,642,000	2,669,000	2,972,000	5,259,000	2,484,000	2,775,000	383,000	185,000	197,000
70 to 74 years	4,228,000	1,948,000	2,280,000	3,963,000	1,821,000	2,142,000	265,000	128,000	138,000
75 to 79 years	2,881,000	1,265,000	1,617,000	2,685,000	1,174,000	1,511,000	196,000	91,000	106,000
80 to 84 years	1,449,000	621,000	828,000	1,351,000	574,000	776,000	98,000	46,000	52,000
85 years and over	841,000	351,000	490,000	754,000	312,000	442,000	87,000	39,000	48,000
Total—All Ages	**173,260,000**	**85,407,000**	**87,853,000**	**154,055,000**	**76,055,000**	**78,001,000**	**19,205,000**	**9.352,000**	**9,853,000**
14 years and over	122,609,000	59,565,000	63,043,000	110,275,000	53,663,000	56,612,000	12,334,000	5,903,000	6,431,000
18 years and over	111,980,000	54,169,000	57,811,000	100,916,000	48,899,000	52,017,000	11,064,000	5,270,000	5,794,000
21 years and over	105,328,000	50,906,000	54,422,000	95,119,000	46,055,000	49,064,000	10,210,000	4,852,000	5,358,000
Median Age	30 years	28.8 years	30.5 years	30.4 years	29.6 years	31.2 years	23.3 years	22.4 years	24.2 years

*—Excluding armed forces overseas, out including those stationed within the U. S.

Distribution of Persons 14 Years of Age and Over by Total Money Income, by Sex

As reported by the Bureau of the Census

	Both Sexes				Male				Female			
	1957	1956	1955	1945	1957	1956	1955	1945	1957	1956	1955	1945
Per Cent with Income	70.7	71.1	69.2	65.3	91.5	91.9	91.8	89.5	52.4	51.9	49.2	45.1
Per Cent without Income	29.3	28.9	30.8	34.7	8.5	8.1	8.2	10.5	47.6	48.1	50.8	54.9
Total Persons	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
Income Classes	Percentage Distribution of Persons 14 Years of Age and Over in Income Classes											
Loss	0.5	0.5	0.6	0.4	0.7	0.7	0.9	0.6	0.2	0.3	0.3	0.1
$1 to $499	15.7	15.8	15.8	18.7	8.5	8.4	8.5	11.6	26.8	27.3	27.7	30.3
$500 to $999	12.3	12.5	12.8	19.4	8.1	8.1	8.8	16.5	18.7	19.3	19.3	24.3
$1,000 to $1,499	8.2	8.0	8.7	15.9	6.5	6.2	7.0	13.8	10.8	10.6	11.6	19.4
$1,500 to $1,999	6.7	6.8	7.0	12.8	5.2	5.5	5.8	12.2	9.1	8.7	9.0	13.8
$2,000 to $2,499	7.3	7.4	7.9	10.8	6.4	6.4	7.0	13.2	8.8	9.0	9.4	7.0
$2,500 to $2,999	5.6	6.1	6.3	7.7	5.2	5.7	6.2	10.7	6.1	6.7	6.4	2.7
$3,000 to $3,499	6.9	7.0	7.7	5.7	6.9	7.4	8.2	8.4	6.9	6.5	7.0	1.1
$3,500 to $3,999	5.9	6.3	6.5	3.1	6.8	7.4	8.3	4.8	4.4	4.5	3.7	0.3
$4,000 to $4,499	6.4	6.8	6.5	1.5	8.4	9.2	8.9	2.3	3.2	3.0	2.6	0.2
$4,500 to $4,999	4.9	4.6	4.6	1.0	6.9	6.7	6.9	1.5	1.7	1.3	0.8	0.2
$5,000 to $5,999	8.3	7.8	6.9	1.6	12.5	11.9	10.3	2.4	1.9	1.5	1.2	0.1
$6,000 to $9,999	9.0	8.1	6.8	0.8	14.1	12.7	10.5	1.3	1.2	0.9	0.8	0.1
$10,000 and over	2.4	2.3	1.9	0.5	3.7	3.6	2.9	0.8	0.3	0.2	0.3	0.1
Total—Income Classes	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
Medium income for persons with income	$2,452	$2,432	$2,323	$1,360	$3,684	$3,608	$3,354	$1,811	$1,199	$1,146	$1,116	$901

INDUSTRIAL PRODUCTION

INDEXES OF INDUSTRIAL PRODUCTION

Adjusted for Seasonal Variation

Based on Monthly Average of 1947-1949 = 100

Total Industrial Production

	1958	1957	1956	1955
Jan.	133	145	143	132
Feb.	130	146	143	135
Mar.	128	145	141	135
Apr.	126	144	143	136
May	128	144	141	138
June	132	145	141	139
July	134	145	136	139
Aug.	136	145	143	140
Sept.	137	144	144	142
Oct.	138	142	146	143
Nov.	141	139	146	143
Dec.	142	135	147	144
Average	134	143	143	139

Manufacturers

	1958	1957	1956	1955
Jan.	135	147	145	132
Feb.	131	147	144	134
Mar.	129	147	143	136
Apr.	128	145	144	138
May	130	145	143	140
June	134	147	142	141
July	136	147	138	141
Aug.	138	147	144	142
Sept.	139	146	146	144
Oct.	140	143	147	145
Nov.	144	141	147	145
Dec.	144	137	149	146
Average	136	145	144	140

Durable Manufacturers

	1958	1957	1956	1955
Jan.	142	163	160	145
Feb.	137	164	158	147
Mar.	135	163	157	148
Apr.	131	160	159	151
May	134	160	157	153
June	139	163	157	155
July	141	162	148	155
Aug.	144	163	158	158
Sept.	145	160	162	160
Oct.	146	156	163	161
Nov.	152	154	165	161
Dec.	152	146	167	161
Average	141	160	159	155

INDEX OF INDUSTRIAL PRODUCTION

Transportation Equipment

	1958	1957	1956	1955
Jan.	191	218	200	197
Feb.	185	222	199	199
Mar.	183	219	196	200
Apr.	178	216	193	202
May	182	216	187	202
June	185	220	188	198
July	185	216	189	202
Aug.	186	216	191	203
Sept.	178	212	193	205
Oct.	183	208	203	208
Nov.	205	203	216	212
Dec.	203	194	223	212
Average	187	213	199	203

Nondurable Manufacturers

	1958	1957	1956	1955
Jan.	127	130	130	121
Feb.	125	131	130	121
Mar.	124	131	128	124
Apr.	125	130	130	126
May	126	131	129	127
June	129	131	128	128
July	132	131	128	126
Aug.	133	132	130	125
Sept.	133	131	130	128
Oct.	134	130	131	129
Nov.	135	128	129	130
Dec.	136	127	130	130
Average	130	130	129	126

Minerals

	1958	1957	1956	1955
Jan.	121	131	129	120
Feb.	118	132	129	123
Mar.	112	132	129	121
Apr.	109	131	129	119
May	109	130	128	121
June	112	127	129	122
July	116	128	123	120
Aug.	120	129	130	121
Sept.	123	129	131	123
Oct.	122	127	131	123
Nov.	123	123	130	125
Dec.	123	122	131	129
Average	117	128	129	122

Manufacturers' Sales, Inventories, Net New Orders

Based on data from the Office of Business Economics, Department of Commerce

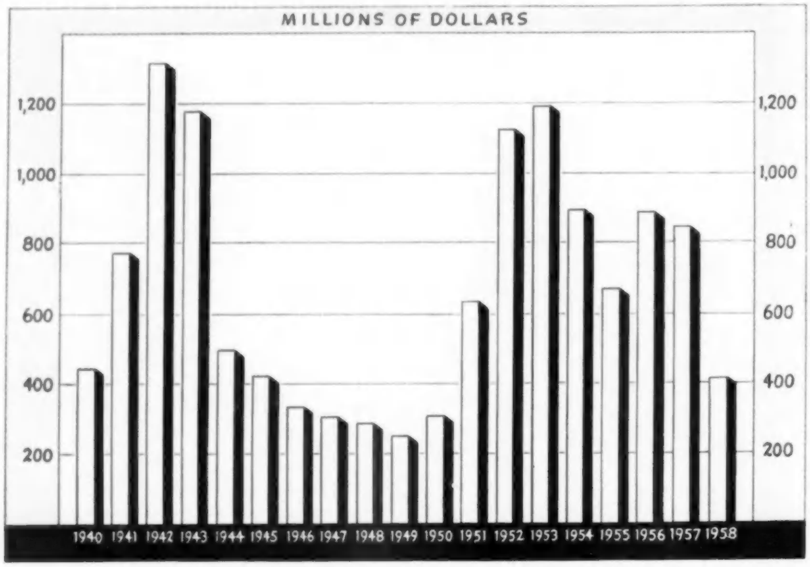
All data are in Millions of Dollars and are adjusted for seasonal variation

Year	SALES			INVENTORIES, DEC. 31			NET NEW ORDERS		
	All Manufacturers	Durable Goods	Non-durable Goods	All Manufacturers	Durable Goods	Non-durable Goods	All Manufacturing	Durable Goods	Non-durable Goods
1958	$314,896	$148,806	$166,090	$49,221	$27,824	$21,397	$311,991	$145,575	$166,416
1957	341,212	170,278	170,934	53,520	31,148	22,372	327,758	157,589	170,169
1956	332,148	165,194	166,954	52,395	30,660	21,635	341,530	174,911	166,619
1955	316,116	156,987	159,129	46,364	26,664	19,700	326,221	166,411	159,810
1954	282,250	134,773	147,477	42,985	24,084	18,901	269,839	121,942	147,897
1953	294,094	148,597	145,497	45,431	26,244	19,187	277,009	132,289	144,720

MACHINE TOOLS

VALUE OF MACHINE TOOL SHIPMENTS

METAL CUTTING TYPE



Value of Machine Tool Shipments—Metal Cutting Type Only

Yearly Totals for Domestic and Foreign Use

As reported by the National Machine Tool Builders Association

Year	Domestie	Foreign	Total	Year	Domestic	Foreign	Total	Year	Domestic	Foreign	Total
1958	$356,550,000	$53,600,000	$410,150,000	1954	$ 813,250,000	$ 78,500,000	$ 891,750,000	1950	$245,950,000	$59,600,000	$305,550,000
1957	753,350,000	90,550,000	843,900,000	1953	1,078,050,000	113,150,000	1,191,200,000	1949	186,850,000	62,300,000	249,150,000
1956	804,600,000	81,550,000	886,150,000	1952	1,003,200,000	122,700,000	1,125,900,000	1948	237,700,000	50,750,000	288,450,000
1955	600,010,000	70,390,000	670,400,000	1951	569,000,000	63,250,000	632,250,000	1947	224,600,000	81,400,000	306,000,000

Value of Metal Cutting and Forming Machine Tool Net New Orders

As reported by the National Machine Tool Builders Association

	Metal Cutting Type			Metal Forming Type			Total—All Types		
Month	1958	1957	1956	1958	1957	1956	1958	1957	1956
January	$19,300,000	$63,250,000	$109,500,000	$7,550,000	$12,250,000	$29,900,000	$26,850,000	$75,500,000	$139,450,000
February	22,800,000	58,200,000	81,300,000	5,500,000	13,700,000	21,650,000	28,300,000	71,900,000	102,950,000
March	29,450,000	58,900,000	89,500,000	6,700,000	13,850,000	16,850,000	36,150,000	72,750,000	106,350,000
April	22,900,000	51,300,000	79,300,000	5,400,000	13,000,000	22,400,000	28,300,000	64,300,000	101,700,000
May	21,900,000	41,400,000	87,100,000	6,150,000	12,250,000	15,350,000	28,050,000	53,650,000	102,450,000
June	23,050,000	43,100,000	61,850,000	9,050,000	9,700,000	16,550,000	32,100,000	52,800,000	78,400,000
July	20,900,000	55,500,000	61,900,000	5,650,000	7,150,000	23,450,000	26,550,000	62,650,000	85,350,000
August	19,250,000	44,500,000	87,500,000	9,050,000	8,400,000	19,700,000	28,300,000	52,900,000	107,200,000
September	20,100,000	28,800,000	78,450,000	8,000,000	7,950,000	12,050,000	28,100,000	36,750,000	99,500,000
October	28,450,000	27,800,000	66,100,000	8,550,000	11,900,000	18,500,000	37,000,000	39,700,000	84,600,000
November	22,250,000	28,350,000	64,250,000	8,450,000	6,800,000	14,650,000	30,700,000	35,150,000	78,900,000
December	30,150,000	18,650,000	57,200,000	12,800,000	6,200,000	16,950,000	42,950,000	24,850,000	74,150,000
Total	$280,000,000	$519,750	$924,000,000	$92,850,000	$123,150,000	$228,000,000	$373,350,000	$642,900,000	$1,152,000,000

Value of Metal Cutting and Forming Machine Tool Shipments

As reported by the National Machine Tool Builders Association

	Metal Cutting Type			Metal Forming Type			Total—All Types		
Month	1958	1957	1956	1958	1957	1956	1958	1957	1956
January	$47,750,000	$76,550,000	$54,600,000	$10,050,000	$23,350,000	$16,400,000	$57,800,000	$99,900,000	$71,000,000
February	38,500,000	77,700,000	64,600,000	9,550,000	25,650,000	21,650,000	48,050,000	103,350,000	86,250,000
March	45,850,000	89,100,000	74,150,000	8,300,000	26,500,000	27,450,000	54,150,000	115,600,000	101,600,000
April	40,200,000	87,800,000	71,800,000	10,700,000	22,850,000	23,800,000	50,900,000	110,650,000	95,600,000
May	37,600,000	78,500,000	76,800,000	12,500,000	25,800,000	27,300,000	50,100,000	104,300,000	104,100,000
June	35,450,000	82,950,000	76,250,000	10,050,000	24,000,000	28,850,000	45,500,000	106,950,000	105,100,000
July	23,200,000	58,700,000	65,150,000	6,500,000	22,750,000	26,850,000	29,700,000	81,450,000	92,000,000
August	23,150,000	63,200,000	75,100,000	6,650,000	15,100,000	27,750,000	29,800,000	78,300,000	102,850,000
September	27,200,000	64,750,000	71,100,000	7,700,000	17,300,000	27,500,000	34,900,000	82,050,000	98,600,000
October	32,750,000	60,900,000	89,750,000	8,650,000	15,150,000	29,400,000	41,400,000	76,050,000	119,150,000
November	25,450,000	47,600,000	81,700,000	8,200,000	12,150,000	25,350,000	33,650,000	59,750,000	107,050,000
December	33,050,000	56,150,000	85,150,000	9,800,000	13,950,000	26,600,000	42,850,000	70,100,000	111,750,000
Total	$410,150,000	$843,900,000	$886,150,000	$108,650,000	$244,550,000	$308,900,000	$518,800,000	$1,088,450,000	$1,195,050,000

TIRES AND TUBES

Shipments, Production, and Inventory of Car, Truck and Bus Tires

As reported by the Rubber Manufacturers Association

Year	Shipments: Original Equipment	Replacement	Export	Total	Production	Year End Inventory
			PASSENGER CAR TIRES			
1958	23,408,073	61,570,108	[illegible]	85,695,523	83,636,178	17,778,036
1957	32,723,955	56,605,037	888,457	90,217,449	93,547,244	19,817,850
1956	30,873,852	53,216,773	874,751	84,965,376	85,522,637	16,493,813
1955	42,574,053	50,189,250	966,406	93,729,709	97,223,165	15,963,038
1954	29,741,478	47,043,543	927,646	77,712,667	76,794,128	12,217,280
1953	33,098,490	45,874,056	806,199	79,778,745	81,430,817	13,043,064
1952	24,106,077	45,457,870	740,954	70,304,901	74,341,140	11,251,074
			TRUCK AND BUS TIRES			
1958	3,375,039	9,226,435	630,903	13,232,377	12,926,695	3,161,267
1957	4,040,732	8,545,168	845,182	13,431,082	13,393,818	3,407,557
1956	4,547,875	8,894,228	882,532	14,324,635	14,859,457	3,377,991
1955	4,800,314	9,056,789	912,223	14,769,326	14,955,092	2,815,258
1954	3,591,223	8,111,034	825,601	12,527,858	12,346,811	2,544,705
1953	4,837,634	9,317,012	733,954	14,888,600	14,690,498	2,662,741
1952	5,377,635	8,884,074	779,007	15,040,716	16,069,975	2,859,156
			TOTAL AUTOMOTIVE TIRES			
1958	26,783,112	70,796,543	1,348,245	98,927,900	96,562,873	20,939,303
1957	36,764,687	65,150,205	1,733,639	103,648,531	106,941,062	23,225,407
1956	35,421,727	62,111,001	1,757,283	99,290,011	100,382,094	19,871,804
1955	47,374,367	59,246,039	1,878,629	108,499,035	112,178,257	18,778,296
1954	33,332,701	55,154,577	1,753,247	90,240,525	89,140,939	14,761,985
1953	37,936,124	55,191,068	1,540,153	94,667,345	96,121,315	15,705,805
1952	29,483,712	54,341,944	1,519,961	85,345,617	90,411,115	14,110,230

Tire and Inner Tube Shipments

In Units for 1954. Value for 1954—1957.

As reported by the Industry Division, Bureau of the Census

	1954 Quantity	1954 Value
Pneumatic Tires (casings)		
Passenger car	76,712,000	$853,636,000
Motorcycle	67,000	609,000
Truck and bus (incl. off-the-road)	12,552,000	520,168,000
Airplane	369,000	23,557,000
Tractor and implement	2,988,000	68,431,000
Industrial	1,147,000	5,878,000
Bicycle and single tube tires	7,311,000	7,790,000
Total—Pneumatic tires	....	$1,480,069,000
Inner Tubes		
Passenger car	52,090,000	$74,118,000
Motorcycle	64,000	87,000
Truck and bus (incl. off-the-road)	9,208,000	31,328,000
Airplane	257,000	2,125,000
Tractor and implement	2,589,000	7,279,000
Industrial	1,325,000	1,295,000
Bicycle	7,505,000	4,129,000
Total—Inner Tubes	....	$120,361,000
Solid Tires		
Pressed on industrial and highway	314,000	$5,255,000
Cured on industrial (2.00" or larger)	671,000	1,801,000
Bogie, idler and support rollers	286,000	4,986,000
Semi-pneumatic	28,904,000	8,743,000
Other solid	2,422,000	702,000
Total—Solid Tires	....	$21,487,000
Total—Tires and Inner Tubes—1954	....	$1,621,917,000
Total—Tires and Inner Tubes—1955	....	$2,029,764,000
Total—Tires and Inner Tubes—1956	....	$1,988,051,000
Total—Tires and Inner Tubes—1957	....	$1,991,636,000

Shipments of Inner Tubes

As reported by the Rubber Manufacturers Association

Year	Original Equipment	Replacement	Export	Total
1958	2,678,228	37,871,892	869,543	41,419,663
1957	3,045,145	35,683,734	1,077,224	39,806,103
1956	3,099,639	32,358,420	1,039,627	36,497,686
1955	5,001,498	33,387,008	1,000,512	39,389,018
1954	25,070,964	35,576,496	945,275	61,592,735
1953	37,956,879	36,071,886	878,126	74,906,891
1952	29,450,554	32,984,785	1,013,610	63,448,949
1951	32,151,424	32,283,823	1,071,253	65,506,500
1950	41,240,397	42,671,151	811,335	84,722,883

Shipments of Tractor-Implement Tires

As reported by the Rubber Manufacturers Association

	Original Equipment	Replacement	Export	Total
1958	1,709,106	1,815,706	109,984	3,634,796
1957	1,646,919	1,546,372	94,767	3,288,058
1956	1,559,386	1,442,053	106,831	3,108,270
1955	2,188,546	1,439,321	94,147	3,722,014
1954	1,758,067	1,305,753	86,012	3,149,832
1953	2,394,442	1,369,285	67,402	3,831,129

U. S. Rubber Consumption by Tire and Tube and Other Industries

All data are in Long Tons

As reported by The Chemical and Rubber Division, Business and Defense Services Administration

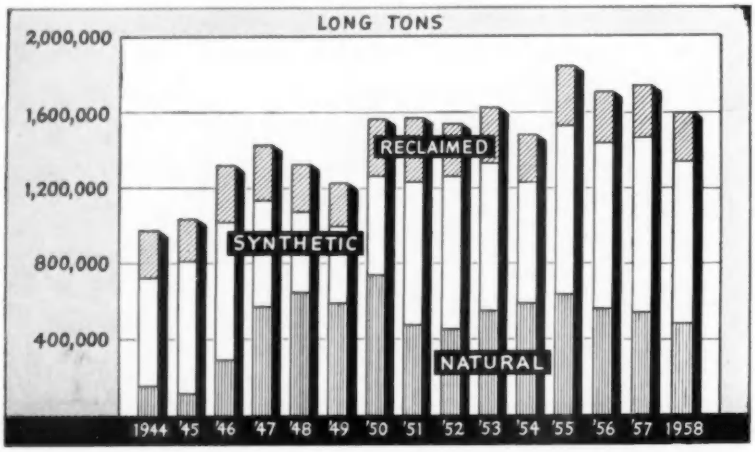
Year	Consumption in Long Tons: Natural	Synthetic	Reclaimed	Total	% of Total Rubber Consumption: Natural	Synthetic	Reclaimed	Total
			CONSUMPTION BY TIRE AND TUBE INDUSTRY					
1958	301,872	558,680	134,915	995,467	62.21	64.06	54.70	62.06
1957	342,727	583,440	141,480	1,067,647	63.61	63.01	53.02	61.66
1956	363,970	533,047	142,968	1,039,985	64.75	60.96	52.84	60.92
1955	409,574	550,282	167,680	1,127,536	64.52	61.49	53.61	61.20
1954	386,284	391,035	125,812	903,131	64.78	61.41	50.52	60.94
1953	358,220	500,283	141,202	999,705	64.72	63.74	49.54	61.58
			CONSUMPTION BY NON-TIRE PRODUCTS INCL. WIRE AND CABLE					
1958	183,370	313,482	111,741	608,593	37.79	35.94	45.30	37.94
1957	196,034	342,439	125,372	663,845	36.39	36.99	46.98	38.34
1956	198,118	341,347	127,579	667,044	35.25	39.04	47.16	39.08
1955	225,226	344,617	145,101	714,944	35.48	38.51	46.39	38.80
1954	210,001	245,692	123,237	578,930	35.22	38.59	49.48	39.06
1953	195,253	284,553	143,848	623,654	35.28	36.26	50.46	38.42

MATERIALS

RUBBER

U. S. CONSUMPTION OF RUBBER

Natural, Synthetic and Reclaimed



Production, Shipments of Camelback—lbs.

Rubber Manufacturers' Association

	Production	Shipments
January	34,173,000	34,280,000
February	32,588,000	30,515,000
March	33,750,000	32,265,000
April	37,534,000	38,019,000
May	40,612,000	37,884,000
June	41,551,000	39,442,000
July	38,569,000	39,154,000
August	43,621,000	41,622,000
September	43,724,000	43,081,000
October	49,952,000	53,238,000
November	40,585,000	40,008,000
December	43,638,000	45,200,000
Total—1958	**480,297,000**	**474,708,000**
Total—1957	**437,739,000**	**443,413,000**
Total—1956	**401,608,000**	**400,787,000**
Total—1955	**368,263,000**	**382,922,000**
Total—1954	**315,774,000**	**305,182,000**
Total—1953	**282,698,000**	**285,805,000**

U. S. Consumption of Natural, Synthetic, and Reclaimed Rubber

All data are in Long Tons

As reported by The Chemical and Rubber Division, Business and Defense Services Administration

		Synthetic Rubber						% of Total			
1958	Natural Rubber	S Type	Butyl	Neo-prene	N Type	Total Synthetic	Total Natural and Synthetic	Natural	Synthetic	Reclaimed	Total All Rubber
January	42,597	60,179	4,508	5,928	2,010	72,625	115,222	37.0	63.0	21,186	136,408
February	36,711	52,962	4,255	5,045	1,968	64,230	100,941	36.4	63.6	18,130	119,071
March	38,191	54,816	4,297	4,965	1,962	66,040	104,231	36.7	63.3	19,300	123,531
April	36,608	55,133	4,621	4,962	1,897	66,613	103,221	35.5	64.5	19,746	122,967
May	36,014	55,463	4,258	4,805	1,778	66,304	102,318	35.2	64.8	20,104	122,422
June	37,607	58,507	4,402	4,844	2,053	69,806	107,413	35.0	65.0	20,652	128,065
July	34,235	53,903	3,791	4,454	1,717	63,865	98,100	34.9	65.1	18,350	116,450
August	39,444	59,458	4,277	5,719	2,308	71,762	111,206	35.5	64.5	−19,347	130,553
September	44,814	64,860	4,725	6,405	2,471	78,461	123,275	36.4	63.6	21,771	145,046
October	48,957	73,242	4,982	7,105	2,686	88,015	136,972	35.8	64.2	23,563	160,535
November	43,101	65,883	4,419	6,211	2,500	79,013	122,114	35.3	64.7	21,271	143,385
December	46,963	71,290	4,897	6,701	2,540	85,428	132,391	35.5	64.5	23,238	155,627
Total—1958	**485,242**	**725,696**	**53,432**	**67,144**	**25,890**	**872,162**	**1,357,404**	**35.8**	**64.2**	**246,656**	**1,604,060**
Total—1957	**538,761**	**767,218**	**55,813**	**75,661**	**27,187**	**925,879**	**1,464,640**	**36.8**	**63.2**	**266,852**	**1,731,492**
Total—1956	**562,088**	**724,028**	**49,581**	**74,852**	**25,933**	**874,394**	**1,436,482**	**39.1**	**60.9**	**270,547**	**1,707,029**
Total—1955	**634,800**	**741,997**	**53,991**	**72,876**	**26,035**	**894,899**	**1,529,699**	**41.5**	**58.5**	**312,781**	**1,842,480**
Total—1954	**596,285**	**500,345**	**61,464**	**57,203**	**17,715**	**636,727**	**1,233,012**	**48.4**	**51.6**	**249,049**	**1,482,061**

Natural Rubber Imports, Consumption, Reexports, and Stocks

All data are in Long Tons

As reported by The Chemical and Rubber Division, Business and Defense Services Administration

	DRY				LATEX			TOTAL		
	Imports	Con-sumption	Re-exports[2]	Stocks, Dec. 31	Imports	Con-sumption	Stocks, Dec. 31	Imports	Con-sumption	Stocks, Dec. 31
1958[3]	322,532[3]	414,309	14,134[3]	68,907	55,567[3]	70,933	8,900	378,099[3]	485,242	77,807
1957[3]	391,521[3]	......	9,143[3]	.....	63,017[3]	.....	.....	454,538[3]	......	......
1957[4]	475,958	463,752	10,146	86,947	77,085	75,009	14,454	553,043	538,761	101,401
1956	507,499	488,988	11,302	104,207	71,718	73,100	12,262	579,217	562,088	116,469
1955	544,528	548,322	10,611	96,902	93,049	86,478	13,203	637,577	634,800	110,105
1954	522,364	520,354	7,443	93,410	74,836	75,931	11,133	597,200	596,285	104,543
1953	572,103	486,098	8,376	98,784	75,511	67,375	13,532	647,614	553,473	112,316

[2]—Includes natural rubber, dry and latex. [3]—For ten months only. [4]—For full year period.

STEEL

Shipments of Steel Products by Market Classifications

All Grades including Carbon, Alloy and Stainless

As reported by the American Iron and Steel Institute.

Consuming Industries	1958 Net Tons	1958 % of Total	1957 Net Tons	1957 % of Total	1956 Net Tons	1956 % of Total	1955 Net Tons	1955 % of Total
Automotive								
Vehicles and Parts (assemblers)	9,850,140	16.44	9,229,202	11.55	8,752,251	10.51	11,877,436	14.02
Parts, Accessories, and Supplies			4,666,113	5.84	4,991,712	6.00	6,325,973	7.47
Forkings	274,894	.46	331,781	.42	397,584	.48	518,471	.61
Tractors	22,090	.04	582,858	.73	770,232	.92	754,390	.89
Aircraft	62,209	.10	99,561	.12	134,721	.16	86,892	.11
Total—Automotive and Aircraft	10,209,333	17.04	14,909,515	18.66	15,046,840	18.07	19,573,162	23.10
Warehouses and Distributors	10,902,283	18.20	14,507,308	18.16	16,752,233	20.12	15,758,005	18.60
Construction, including Maintenance	8,722,549	14.56	12,523,285	15.67	10,441,126	12.54	9,681,778	11.42
Containers	6,568,583	10.96	6,237,583	7.81	6,818,361	8.19	6,723,074	7.94
Contractors' Products	3,467,189	5.79	3,403,580	4.26	4,074,577	4.89	3,982,161	4.70
Machinery, Ind. Equip. & Tools (less Tractors)	3,159,106	5.27	3,929,440	4.92	4,261,367	5.12	3,944,634	4.66
Steel for Converting and Processing	2,854,574	4.76	3,396,529	4.25	3,776,559	4.54	3,753,381	4.43
Export	2,429,149	4.05	4,568,795	5.72	3,622,427	4.35	3,583,077	4.23
Electrical Machinery and Equipment	1,771,514	2.96	2,085,675	2.61	2,437,804	2.93	2,291,866	2.71
Other Domestic and Commercial Equipment	1,715,542	2.86	1,837,940	2.30	2,263,775	2.72	2,189,416	2.58
Appliances, Utensils and Cutlery	1,590,095	2.65	1,558,569	1.95	2,129,115	2.56	2,199,114	2.60
Rail Transportation	1,472,112	2.46	4,149,074	5.19	4,226,654	5.08	3,520,849	4.16
Agricultural	1,193,114	1.99	1,098,102	1.37	1,082,459	1.30	1,336,886	1.58
Bolts, Nuts, Rivets and Screws	878,873	1.47	1,149,545	1.44	1,485,087	1.78	1,475,340	1.74
Shipbuilding and Marine Equipment	797,511	1.33	1,277,772	1.60	760,306	.91	601,234	.71
Forgings, other than Automotive	767,217	1.28	1,056,036	1.32	1,473,186	1.77	1,266,032	1.49
Oil and Gas Drilling	305,923	.51	700,501	.88	778,714	.94	792,767	.94
Ordnance and Other Military	238,690	.40	356,406	.45	523,890	.63	856,527	1.01
Mining, Quarrying and Lumbering	179,505	.30	328,803	.41	349,508	.42	268,987	.32
Non-Classified Shipments	691,571	1.16	820,119	1.03	947,180	1.14	919,154	1.07
Total—Shipments	59,914,433	100.00	79,894,577	100.00	83,251,168	100.00	84,717,444	100.00

Shipments of Carbon, Alloy, and Stainless Steel, by Markets, 1957-1958

All data are in Net Tons

As reported by the American Iron & Steel Institute

Consuming Industries	Carbon Steel 1958	Carbon Steel 1957	Alloy Steel 1958	Alloy Steel 1957	Stainless Steel 1958	Stainless Steel 1957
Automotive						
Vehicles and Parts (assemblers)	5,918,048	8,453,182	534,610	734,553	27,727	41,467
Parts, Accessories and Supplies	2,939,685	4,035,976	390,226	566,017	39,844	64,120
Forgings	156,248	199,022	118,577	132,043	69	716
Tractors	411,793	523,507	48,211	59,305	28	46
Aircraft	16,127	27,285	31,141	46,461	14,941	25,815
Total—Automotive and Aircraft	9,441,901	13,238,972	1,122,765	1,538,379	82,609	132,164
Steel for Converting and Processing	2,746,547	3,260,610	52,967	83,477	55,060	52,442
Forgings, other than Automotive	458,520	640,857	299,027	400,165	9,670	15,014
Bolts, Nuts, Rivets and Screws	827,206	1,067,800	45,968	73,552	5,699	8,193
Warehouses and Distributors	10,422,194	13,787,119	308,533	513,905	171,556	206,284
Construction, including Maintenance	8,615,083	12,389,227	98,821	126,296	8,645	7,762
Contractors' Products	3,442,110	3,371,876	11,343	17,483	13,736	14,221
Rail Transportation	1,379 824	3,926,025	91,974	221,062	314	1,987
Shipbuilding and Marine Equipment	701,322	1,175,840	93,868	99,590	2,321	2,342
Oil and Gas Drilling	223,482	531,719	81,850	167,970	591	812
Mining, Quarrying and Lumbering	163,136	299,296	16,055	28,985	314	522
Agricultural	1,168,653	1,069,289	24,112	28,192	349	621
Machinery, Ind. Equip. & Tools (less Tractors)	2,348,420	3,398,288	330,794	480,299	41,950	50,853
Electrical Machinery and Equipment	1,367,482	1,611,156	394,350	461,128	9,682	13,391
Appliances, Utensils and Cutlery	1,542,462	1,513,273	10,709	10,686	36,924	34,610
Other Domestic and Commercial Equipment	1,691,003	1,805,603	13,015	18,189	11,524	14,148
Containers	6,553,334	6,209,589	13,887	26,255	1,362	1,739
Ordnance and Other Military	164,424	277,161	71,962	76,841	2,304	2,404
Export	2,266,842	4,324,920	147,567	217,604	14,740	26,271
Non-Classified Shipments	553,147	632,989	114,282	153,155	24,142	33,975
Total—Shipments	56,077,092	74,531,609	3,343,849	4,743,213	493,492	619,755

Average Car Usage of Aluminum

Based on Estimated 1959 Output of 5,500,000

Commercial Research Division, Aluminum Company of America

Make of Car	Pounds per Car* 1959	1958†	1957
Total—American Motors Corp.	49.91	49.22	48.25
Chrysler	88.03	90.93	103.75
De Soto	85.66	86.41	93.76
Dodge	72.72	70.96	64.80
Imperial	99.67	109.54	120.46
Plymouth	61.27	69.77	54.10
Total—Chrysler Corp.	68.92	75.32	67.32
Edsel	58.78	54.80	....
Ford	59.09	46.13	34.12
Lincoln	91.81	91.83	59.94
Mercury	61.11	63.48	43.20
Total—Ford Motor Co.	60.03	49.60	35.96
Buick	74.84	68.43	43.74
Cadillac	77.65	85.79	63.38
Chevrolet	27.40	23.72	23.18
Oldsmobile	59.41	55.25	43.74
Pontiac	48.90	41.17	36.22
Total—General Motors Corp.	42.33	38.27	32.56
Packard	(1)	34.88	32.88
Studebaker	18.66	20.01	15.60
Total—Studebaker-Packard Corp.	18.66	20.76	16.72
Total—Checker Motors Corp.	33.88	(2)	(2)
Total—All Cars	51.58	47.32	40.51

*—Average car refers to composite body model with aluminum weight distributed. Weights are net or finished parts weights: scrap is not included.
(1)—No Packard production for 1959. (2)—The Superba not in production.
†—Revised.

Net Shipments of Aluminum Mill Products

Industry Division, Bureau of the Census

	Thousands of Pounds 1958	1957	1956
January	193,408	234,947	251,639
February	179,035	207,459	240,705
March	190,092	230,418	279,119
April	211,485	238,845	260,517
May	217,299	250,424	264,308
June	228,266	228,081	240,562
July	229,654	249,588	247,806
August	213,419	224,324	217,766
September	231,168	216,023	217,425
October	254,023	232,820	252,867
November	216,249	186,974	218,272
December	236,019	177,520	194,822
Total	2,600,067	2,677,423	2,885,808

Value of Plastics Materials Shipments

All data are in Thousands of Dollars

As reported by the Industry Division, Bureau of the Census

	1957	1956	1955
Cellulose plastics material	$130,927	$123,861	$104,932
Regenerated cellulosic products	228,127	279,643	241,081
Vinyl and polyethylene unsupported film and sheeting	278,817	256,520	225,186
Synthetic resins	1,109,153	1,029,446	991,060
Other plastics and resin materials	289,004	289,026	262,438
Total—Plastic materials*	$2,112,792	$1,997,516	$1,839,468

*—Individual figures will not add to totals, due to unreported data.

Estimated Sales of Reinforced Plastics

As reported by The Society of the Plastics Industry

Major Markets	1958 Pounds	1958 % of Total	1957 Pounds	1957 % of Total
Aircraft & Missiles	18,500,000	10	25,200,000	15
Appliances	7,400,000	4	5,040,000	3
Boats	37,000,000	20	25,200,000	15
Construction	31,450,000	17	25,200,000	15
Consumer Products	24,050,000	13	25,200,000	15
Containers, Trays Indust. Housings	7,400,000	4	5,040,000	3
Electrical	7,400,000	4	5,040,000	3
Pipe, Tanks, Ducts	5,550,000	3	3,360,000	2
Transportation*	29,600,000	16	33,600,000	20
Miscellaneous	16,650,000	9	15,120,000	9
Total	185,000,000	100	168,000,000	100

*—Reflects the decline in motor vehicle production.

Net Shipments of Magnesium Mill Products

In Thousands of Pounds

As reported by the Industry Division, Bureau of the Census

Month	1958	1957	1956	1955
January	1,271	2,130	2,118	1,776
February	1,280	2,522	1,901	1,648
March	1,398	2,388	2,351	1,947
April	1,479	2,510	2,279	1,757
May	1,443	2,230	2,462	1,836
June	1,709	1,881	2,302	1,686
July	1,227	1,428	2,002	1,437
August	1,823	1,540	2,523	1,742
September	1,807	1,501	2,031	2,159
October	1,983	1,453	861	1,667
November	1,660	1,230	2,141	1,954
December	1,622	1,102	2,452	1,577
Total	18,702	21,915	25,423	21,186

Production of Titanium Mill Products†

As reported by the Industry Division Bureau of the Census

Month	Sheet, Plate and Strip 1958	Sheet, Plate and Strip 1957	Forging and Extrusion Billet 1958	Forging and Extrusion Billet 1957	Rod, Bar and Wire 1958	Rod, Bar and Wire 1957	Total Production 1958	Total Production 1957
January	124,410	385,819	158,838	741,552	132,496	426,971	415,744	1,554,342
February	118,872	328,450	242,071	727,284	84,535	367,146	445,478	1,422,880
March	110,523	401,476	276,359	626,577	103,941	491,464	490,823	1,519,517
April	150,377	384,100	141,033	692,017	99,789	421,649	391,199	1,497,766
May	136,365	474,610	172,077	349,281	87,170	362,979	395,612	1,186,870
June	174,734	375,006	127,915	531,306	174,456	268,585	477,105	1,174,897
July	148,660	350,340	105,338	368,848	70,098	178,596	324,096	897,784
August	187,377	322,429	96,389	286,770	115,194	168,344	398,960	777,543
September	172,706	222,740	115,033	202,729	116,195	109,336	403,934	534,805
October	234,814	134,892	103,051	123,218	103,301	110,712	441,166	368,822
November	245,415	82,160	69,819	50,860	109,324	56,593	424,558	189,613
December	226,209	87,423	193,474	61,034	97,825	42,524	517,508	190,981
Total	2,030,462	3,549,445	1,801,397	4,761,476	1,294,324	3,004,899	5,126,183	11,315,820

*—Total for eleven months only. †—For each product, shipments were equal to production.

Construction Machinery
Excavating and Earthmoving Equipment

As reported by the Industry Division, Bureau of the Census

Type of Equipment	1958* Number	1958* Value	1957 Number	1957 Value	1956 Number	1956 Value
Tracklaying Tractors[1]	23,153	$227,747,000	32,863	$306,126,000	55,417	$471,384,000
Parts for Tracklaying Tractors	N.A.	N.A.	.....	202,253,000	....	251,358,000
Wheel Tractors, contractors' off-highway type						
By Type						
2-wheel	2,309	47,905,000	3,763	72,635,000	N.A.	N.A.
4-wheel	1,029	21,747,000	1,654	31,477,000	N.A.	N.A.
Attachments	N.A.	N.A.	.....	2,539,000	......	598,000
Parts	N.A.	N.A.	.....	40,432,000	......	41,031,000
Total—Wheel Tractors	**3,338**	**$69,652,000**	**5,417**	**$147,083,000**	......	....
Off-Highway Equipment						
Wheel Tractors—Truck type, 2 and 3 axles	N.A.	N.A.	82	1,403,000	4,576	80,380,000
Off-Highway Type Haulers	1,285	31,359,000	3,048	64,588,000		
Off-Highway Trailers and Wagons	309	3,824,000	763	8,570,000	669	6,552,000
Total—Off-Highway Equipment	**1,594**	**$35,183,000**	**3,893**	**$74,561,000**	**5,245**	**$86,932,000**
Tractor Shovel Loaders, Integral Units						
Wheel Type	4,975	$51,262,000	7,701	68,592,000	N.A.	N.A.
Tracklaying Type	6,372	70,025,000	8,838	97,223,000	N.A.	N.A.
Total—Shovel Loaders	**11,347**	**$121,287,000**	**16,539**	**$165,815,000**	**N.A.**	**N.A.**
Locomotive Cranes (except wrecking)	N.A.	N.A.	85	$6,299,000	N.A.	N.A.
Power Cranes						
Crawler Mounted	N.A.	N.A.	4,868	216,931,000	6,683	237,293,000
Rubber Tire Cranes	N.A.	N.A.	3,616	83,161,000	3,808	83,486,000
Walking Draglines and Cranes	N.A.	N.A.	21	11,650,000	20	8,439,000
Total—Power Cranes	**N.A.**	**N.A.**	**8,505**	**$311,742,000**	**10,511**	**$329,218,000**
Mixers, Pavers, and Related Equipment						
Concrete Mixers, portable	N.A.	N.A.	7,821	26,585,000	N.A.	N.A.
Concrete Batching Plants	880	11,268,000	1,185	13,869,000	N.A.	N.A.
Bituminous Distributors	679	3,017,000	850	3,533,000	N.A.	N.A.
Bituminous Asphalt Plants						
Travel-mix Type	42	719,000	79	1,464,000	N.A.	N.A.
Central Mixing, Batch Type	230	18,626,000	264	21,514,000	N.A.	N.A.
Central Mixing, Continuous Type	120	9,294,000	163	12,245,000	N.A.	N.A.
Total—Asphalt Plants	**392**	**$28,639,000**	**506**	**$35,223,000**	**N.A.**	**N.A.**
Total—Mixers, Pavers, and Related Equipment	.....	**$42,924,000**	**10,363**	**$79,210,000**	**N.A.**	**N.A.**
Crushing, Screening, Washing Plants, portable	**787**	**$21,276,000**	**1,102**	**$26,356,000**	**N.A.**	**N.A.**
Self Propelled Ditchers and Trenchers						
Ladder-type	931	3,127,000	808	4,242,000	648	4,553,000
Wheel-type	207	2,955,000	336	4,479,000	553	5,934,000
Total	**1,138**	**$6,082,000**	**1,144**	**$8,721,000**	**1,201**	**$10,487,000**
Scrapers, dig, carrying, and hauling						
7 and under 12 cu. yds.	878	5,356,000	1,681	9,614,000	.....	....
12 to 18 cu. yds.	2,338	32,741,000	1,555	14,556,000	.....	....
18 cu. yds. and over			2,335	35,336,000	...	....
Total	**3,216**	**$38,097,000**	**5,571**	**$59,506,000**	**5,726**	**$51,366,000**
Rollers and Compactors						
Rollers, self-propelled						
3-wheeled	384	2,944,000	635	4,902,000	712	5,016,000
Portable	224	646,000	334	1,020,000	356	1,124,000
Tandem, 2 and 3 axle	1,380	6,438,000	2,078	9,358,000	2,040	9,595,000
Other, incl. tamping and sheepsfoot						
Compactors	4,983	15,015,000	4,302	15,280,000	N.A.	N.A.
Pull Type						
Self-propelled						
Total—Rollers and Compactors	**6,971**	**$25,043,000**	**7,349**	**$30,560,000**	.....	....
Motor Graders	**5,435**	**$65,113,000**	**8,313**	**$92,802,000**	**9,613**	**101,929,000**
Construction Machinery for Mounting on Tractors						
Sidebooms or Pipe Handlers	380	2,086,000	468	2,109,000	N.A.	N.A.
Dozers (6' blade and over)	14,089	24,826,000	17,972	32,904,000	22,135	$45,927,000
Backhoes	6,149	11,495,000	8,155	14,730,000	N.A.	N.A.
Front-end loaders	11,042	7,770,000	12,738	8,950,000	20,729	49,269,000
Logging Arches	N.A.	N.A.	80	190,000	N.A.	N.A.
Power Control Units	13,965	15,133,000	19,142	21,535,000	12,583	18,254,000
Rippers and Rooters	2,957	4,322,000	2,924	5,291,000	2,343	3,124,000
Total—Machinery for Mounting on Tractors	.....	**$65,632,000**	.....	**$85,709,000**	.....	**$116,574,000**
Total—Construction Machinery	.....	**$718,036,000**	.....	**$1,596,742,000**	.....	**N.A.**

[1]—Also included in table of "Tractor Shipments" shown in Motor Vehicle Section. N.A.—Not available.

*—Data for nine months only.

HEAVY-DUTY AND OFF-HIGHWAY TRUCKS

The data listed below are for standard models. Optional engines, transmissions and rear axles are available for all makes and models.

MAKE AND MODEL		Type	WHEELBASE: Minimum Standard	WHEELBASE: Maximum Standard	WEIGHTS: G.V.W.	WEIGHTS: G.C.W.	WEIGHTS: Chassis with Cab and Body	TIRES: Front	TIRES: Rear—Dual Unless Noted	ENGINE: Make and Model		ENGINE: No. of Cylinders—Bore and Stroke	ENGINE: Displacement	ENGINE: Fuel Used	ENGINE: Max. Brake. Hp. at R.P.M.	ENGINE: Torque (Lb. Ft.)	TRANSMISSION: Make and Model		TRANSMISSION: Forward Speeds	TRANSMISSION: Reverse Speeds	REAR AXLE: Make and Model		REAR AXLE: Gear and Type	FRONT AXLE: Make and Model		SERVICE BRAKES: Make	SERVICE BRAKES: Actuation	SERVICE BRAKES: Total Lining Area (Sq. In.)
Crane Carrier	642	Ch	146 1/4		25,000		8,000	7.50x20	7.50x20	Chr	Ind32	6-3 7/16x4 3/4	265	G	120-3600	221	NP	90680	5	1	Eat	1614	HF	Tim	FD901		H	712
	964A	Ch	149		33,500		10,040	7.50x20	7.50x20	Chr	Ind32	6-3 7/16x4 3/4	265	G	120-3600	221	NP	90680	5	1	Tim	SDH	HF	Tim	FC901F6		H	842
	1064A	Ch	149		35,500		11,460	8.25x20	8.25x20	Chr	Ind32	6-3 7/16x4 3/4	265	G	120-3600	221	NP	90680	5	1	Tim	SFH	HF	Tim	FC901F6		H	896
	1364A	Ch	160		39,000		15,100	9.00x20	9.00x20	Int	BD282	6-3 13/16x4 1/8	283	G	137-3600	251	Ful	5A33	5	1	Eat	28M	HF	Tim	FD901		A	1117
	1564A	Ch	160		43,000		13,880	9.00x20	9.00x20	Int	BD308	6-3 13/16x4 1/2	308	G	150-3600	268	Ful	5A33	5	1	Eat	34R	HF	Tim	FD901		H	1127
	1864A	Ch	175		45,000		18,880	10.00x20	10.00x20	Int	RD406	6-4 3/8x4 1/2	406	G	175-3200	338	Ful	5A43	5	1[1]	Eat	34R	HF	Tim	FE900		A	1287
	2064A	Ch	190		55,000		22,080	10.00x20	10.00x20	Int	RD450	6-4 3/8x5	451	G	182-3000	388	Ful	5A43	5	1[1]	Eat	36M	HF	Shu	FE15		A	1442
	2564A	Ch	205		60,000		28,040	11.00x20	11.00x20	Int	RD501	6-4 1/2x5 1/4	501	G	212-3000	444	Ful	5A620	5	1[1]	Cla	BD72000	SbP	Shu	FE15		A	1620
	3064A	Ch	215		68,000		29,240	12.00x20	12.00x20	Int	RD501	6-4 1/2x5 1/4	501	G	212-3000	444	Ful	5C650	5	1[1]	Cla	BD72000	SbP	Shu	FE18		A	1442
	MC450	Ch	150		37,000		11,680	9.00x20	9.00x20	Int	BD308	6-3 13/16x4 1/2	308	G	150-3600	268	Ful	5A33	5	1	Eat	28MR	HF	Tim	FD901		H	1117
	MC625	Ch	150	Opt	49,000		12,400	10.00x20	9.00x20	Int	RD450	6-4 3/8x5	450	G	182-3000	388	Ful	5A43	5	1[1]	Eat	34R	HF	Shu	FE15		A	1331
	LCM6566	Ch	162		65,000		17,140	10.00x20	10.00x20	Cum	JT6B1	6-4 1/8x5	401	D	175-2500	407	Cla	326Y051	5	1	Cla	BD45000	SbP	Cla	12050		A	1442
	1264A	Ch	160		37,000		12,500	8.25x20	8.25x20	Int	BD282	6-3 13/16x4 1/8	283	G	137-3600	251	Ful	5A33	5	1	Tim	SFH	HF	Tim	FD901		H	1009
	4584C	Ch	224		100,000		38,000	14.00x20	14.00x20	Wau	145GKB	6-5 1/4x6	779	G	240-2400	595	Ful	4A86	5	1	Cla	RP70-80		Shu	FE15		A	
	6084C	Ch	228		106,000		44,000	14.00x20	14.00x20	Wau	145GZB	6-5 3/8x6	815	G	250-2400	610	Ful	4A86	5	1	Cla	RP70-80		Shu	FE15		A	
Dodge	M8-T800	Ch	144	192	45,000	60,000		9.00x22.5	9.00x22.5	Own	M8-T8	8-3 15/16x3 5/8	354	G	224-3900	340	Cla	265V	5	1	Tim	SFHD	HF				H	871
	M8-T900	Ch	144	192	49,000	65,000		11.00x22.5	11.00x22.5	Own	M8-T9	8-3 15/16x3 5/8	354	G	234-3900	360	Cla	300	5	1	Tim	SQHD	HF				A	921
Duplex	K-501	EDT	166	184	34,000		10,630	11.00x20	11.00x20	Int	RD501	6-4 1/2x5 1/4	501	G	212-3000	444			5	2	Tim	U200B	F	Tim	FE900	BW	A	
	LC600-4	EDT	164	188	40,000		15,400	11.00x20	11.00x20	Cum	HRB600	6-5 1/8x6	743	D	175-1800	540	Ful	5C650	5	2	Tim	1758	F	Tim	F409	BW	A	
	L6602-4	EDT	166	190	40,000		13,300	11.00x20	11.00x20	Cont	R6602	6-4 7/8x5 3/8	602	G	200-2600	464	Ful	5C650	5	2	Tim	1758	F	Tim	F409	BW	A	
	LC600	Ch	166	190	37,000		12,900	11.00x20	11.00x20	Cum	HRB600	6-5 1/8x6	743	D	175-1800	540	Ful	5C650	5	2	Tim	U200	F	Tim	FE900	BW	A	
	L	EDT	166	184	37,000		11,300	11.00x20	11.00x20	Her	RXLD	6-4 3/4x5 1/2	558	G	154-2400	432	Ful	5C650	5	2	Tim	U200P	F	Tim	FE900	BW	A	
	L6602	EDT	166	190	37,000		11,900	11.00x20	11.00x20	Cont	R6602	6-4 7/8x5 3/8	602	G	200-2600	464	Ful	5C650	5	2	Tim	U200	F	Tim	FE900	BW	A	
	FA844	EDT	178	178	34,000		18,000	14.00x20	14.00x20S	LR	H844	8-5 1/4x4 7/8	844	G	320-2600	790	All	TG617RM10	3	1	Tim	1758DPA		Tim	F409CW	BW	A	
	L-6	Ch	172	232	60,000		15,000	11.00x20	11.00x20	Cum	HRB600	6-5 1/8x6	743	D	175-1800	540	Ful	5A650	5	2	Tim	SW456	WF	Tim	FE900		A	1078
	RH6	Ch	160	208	40,000		11,500	10.00x20	10.00x20	Cont	B6427	6-4 5/16x4 7/8	427	G	141-2600	325	Ful	5A43	5	1	Tim	SD3010	DF					
Euclid	R-10	EDT	148	148	41,600		21,600	11.00x25	12.00x25	GM	4-71	4-4 1/4x5	284	D	128-1800	375	Ful	10E650	10	2	Own	34RA	F	Own			A	654
	R-18 (91-FD)	EDT	155	155	68,200		32,200	13.00x25	16.00x25	GM	6-71	6-4 1/4x5	426	D	218-2100	570	Ful	5F1220	5	1	Own		F	Own			A	786
	R-18 (94-FD)	EDT	155	155	68,400		32,400	13.00x25	16.00x25	Cum	NH6B	6-5 1/8x6	743	D	220-	612	Ful	5F1220	5	1	Own	60RA	Sf	Own			A	786
	R-22 (36-TD)	EDT	165	165	88,550		44,550	14.00x25	18.00x25	Cum	NHRS	6-5 1/8x6	743	D	320-2100	800	All	TG607	3	1	Own	30RA	F	Own			A	1072
	R-22 (46-TD)	EDT	165	165	87,300		43,300	14.00x25	18.00x25	Cum	NHRS	6-5 1/8x6	743	D	320-2100	800	Ful	10F1220	10	2	Own	47RA	F	Own			A	1072
	R-22 (60-TD)	EDT	177	177	87,500		43,300	14.00x25	18.00x25	GM	6-110	6-5x5 19/32	660	D	300-2000	850	Ful	10F1220	10	2	Own	47RA	F	Own			A	1072
	R-22 (63-TD)	EDT	177	177	88,900		43,500	14.00x25	18.00x25	GM	6-110	6-5x5 19/32	660	D	300-2000	850	All	TG607	3	1	Own	30RA	F	Own			A	1072
	R-27 (65-TD)	EDT	165	165	102,100		48,100	18.00x25	18.00x25	GM	6-110	6-5x5 1/2	660	D	325-	875	All	CBLT5640	4	2	Own		Sf	Own			A	1072
	R-27 (66-TD)	EDT	165	165	103,800		49,800	18.00x25	18.00x25	Cum	NRTD	6-5 1/8x6	743	D	335-	900	All	CBLT5640	4	2	Own		Sf	Own			A	1072
	R-40 (9-FFD)	EDT	180	180	158,000		78,000	18.00x25	18.00x25	GM	T-6-71[3]	6-4 1/4x5	426	D	470-2100	1260	All	TG609[3]	3	1	Own	72RA[3]	F	Own			A	1620
	R-40 (10-FFD)	EDT	180	180	158,000		78,000	18.00x25	18.00x25	Cum	NT6B1[3]	6-5 1/8x6	743	D	500-2100	1390	All	TG609[3]	3	1	Own	72RA[3]	F	Own			A	1620
	R-50 (3-LLD)	EDT	219	219	216,000		116,000	18.00x33	18.00x33	GM	6-110[3]	6-5x5 19/32	660	D	650-2000	1860	All	CT5640[3]	4	2	Own	50RA[3]	F	Own			A	2406
	R-50 (4-LLD)	EDT	219	219	216,000		116,000	18.00x33	18.00x33	Cum	NRTB6B1[3]	6-5 1/8x6	743	D	670-2100	1800	All	CT5640	4	2	Own	50RA[3]	F	Own			A	2406
	S-7	EDT	174	174	50,500		26,500	18.00x25	18.00x25	GM	4-71	4-4 1/4x5	284	D	143-2100	375	All	CT3340[3]	4	2	Own			Own	63RA		A	840
	S-12	EDTr	204	138	88,000		44,000	24.00x25	24.00x25	GM	6-71	6-4 1/4x6	426	D	218-	570	Ful	SF1220	5	1	Own		R	Own			A	1072
	S-18	EDT	236	236	132,260		62,250	27.00x33	27.00x33	GM	6-110	6-5x5 19/32	660	D	300-2000	850	All	CT5640	4	2	Own			Own			A	2360
Fabco	FD251B	Ch	130	Opt	40,000		13,000	8.25x20	9.00x20	Ford		8-3 13/16x3 1/2	317	G	170-3900	286	Ford		10	2	Ford		SF					
Federal	600R1	Ch	145	193	40,000		11,132	11.00x22	11.00x22	Cont	R6602	6-4 7/8x5 3/8	602	G	232-2800	484	Ful	5A65	5	1	Tim	U200	HD					
	600R2	Ch	145	193	40,000		11,285	11.00x22	11.00x22	Cont	R6602	6-4 7/8x5 3/8	602	G	232-2800	484	Ful	5A65	5	1	Tim	U300	HD					
	D700R1	Ch	145	193	40,000		12,545	11.00x22	11.00x22	Cum	NHB600	6-5 1/8x6	743	D	210-2100	535		8051A	5	1	Tim	U200	HD					
	D700R2	Ch	145	193	40,000		12,690	11.00x22	11.00x22	Cum	NHB600	6-5 1/8x6	743	D	210-2100	535		8051A	5	1	Tim	U300	HD					
	400R53	Ch	157	193	42,000		11,177	10.00x20	10.00x20	Cont	T6427	6-4 5/16x4 7/8	427	G	179-3000	356	Cla	290V	5	1		SLHD	Hy					
	D400R53	Ch	157	193	42,000		11,477	10.00x20	10.00x20	Cum	JBS600	6-4 1/8x5	401	D	150-2500	350	Cla	290V	5	1		SLHD	Hy					
	400R54	Ch	157	193	42,000		11,452	10.00x20	10.00x20	Cont	T6427	6-4 5/16x4 7/8	427	G	179-3000	356	Cla	290V	5	1		SLHD	Hy					
	D400R54	Ch	157	193	42,000		11,752	10.00x20	10.00x20	Cum	JBS600	6-4 1/8x5	401	D	150-2500	350	Cla	290V	5	1		SLHD	Hy					
	500R53	Ch	157	193	49,000		13,200	11.00x22	11.00x22	Cont	U6501	6-4 1/2x5 1/4	501	G	178-2600	413	Ful	5A65	5	1	Tim	SQDD	Hy					
	D500R53	Ch	157	193	49,000		14,200	11.00x22	11.00x22	Cum	HRFB600	6-5 1/8x6	743	D	180-2000	550	Ful	5A65	5	1	Tim	SQDD	Hy					
	500R54	Ch	157	193	49,000		13,475	11.00x22	11.00x22	Cont	U6501	6-4 1/2x5 1/4	501	G	178-2600	413	Ful	5A65	5	1	Tim	SQDD	Hy					
	D500R54	Ch	157	193	49,000		14,405	11.00x22	11.00x22	Cum	HRFB600	6-5 1/8x6	713	D	180-2000	550	Ful	5A65	5	1	Tim	SQDD	Hy					
	600R53	Ch	157	193	61,000		14,932	11.00x22	11.00x22	Cont	R6602	6-4 7/8x5 3/8	602	G	232-2800	484	Ful	5A65	5	1		SFDD4600	HD					

	600R54	Ch	157	193	61,000		15,207	11.00x22	11.00x22	Cont	R6602	6-4⅞x5⅜	602	G	232-2800	484	Ful	5A65	5	1		SFDD4600	HD					
	D700R53	Ch	157	193	61,000		17,180	11.00x22	11.00x22	Cum	NHB600	6-5⅛x6	743	D	210-2100	535		8051A	5	1		SFD4600	HD					
	D700R54	Ch	157	193	61,000		17,640	11.00x22	11.00x22	Cum	NHB600	6-5⅛x6	743	D	210-2100	535		8051A	5	1		SFD4600	HD					
	600R44	Ch	145	193	40,000		12,332	11.00x22	11.00x22	Cont	R6602	6-4⅞x5⅜	602	G	232-2800	484	Ful	5A65	5	1	Tim	U200	HD					
	D700R44	Ch	145	193	40,000		13,890	11.00x22	11.00x22	Cum	NHB600	6-5⅛x6	743	D	210-2100	535		8051A	5	1	Tim	U200	HD					
	400R66	Ch	157	193	42,000		12,377	10.00x20	10.00x20	Cont	T6427	6-4 9/16x4⅞	427	G	179-3000	356	Cla	290V	5	1	Tim	SLHD	Hy					
	D400R66	Ch	157	193	42,000		12,677	10.00x20	10.00x20	Cum	JBS600	6-4⅛x5	401	D	150-2500	350	Cla	290V	5	1	Tim	SLHD	Hy					
	500R66	Ch	157	193	49,000		14,400	11.00x22	11.00x22	Cont	U6501	6-4½x5¼	501	G	178-2600	413	Ful	5A65	5	1	Tim	SQDD	Hy					
	D500R66	Ch	157	193	49,000		15,400	11.00x22	11.00x22	Cum	HRFB600	6-5⅛x6	743	D	180-2000	550	Ful	5A65	5	1	Tim	SQDD	Hy					
	600R66	Ch	157	193	61,000		16,132	11.00x22	11.00x22	Cont	R6602	6-4⅞x5⅜	602	G	232-2800	484	Ful	5A65	5	1		SFDD	HD					
	D700R66	Ch	157	193	61,000		18,380	11.00x22	11.00x22	Cum	NHB600	6-5⅛x6	743	D	210-2100	535		8051A	5	1		SFDD4600	HD					
Ford	T-800	Ch	144	192	*43,000		9,715	10.00x22.5	10.00x22.5	Own	ECT	8-3 13/16x3 21/32	332	G	212-3800	328	Cla	265	5	1	Eat	34M	SF					
	T-850	Ch	144	192	*43,000		10,120	10.00x22.5	10.00x22.5	Own	EDL	8-4⅛x3¾	401	G	226-3800	350	Spi	4652	5	1	Eat	34M	SF					
	T-850	Ch	144	192	*43,000		10,120	10.00x22.5	10.00x22.5	Own	EDM	8-4½x3¾	477	G	260-3600	430	Spi	6352	5	1	Eat	34M	SF					
	T-850	Ch	144	192	*43,000		10,120	10.00x22.5	10.00x22.5	Own	EDN	8-4½x4 13/64	534	G	277-3400	490	Spi	6352	5	1	Eat	34M	SF					
	T-950	Ch	156	192	*46,000		11,405	11.00x22.5	11.00x22.5	Own	EDL	8-4⅛x3¾	401	G	226-3800	350	Spi	4652	5	1	Eat	38D	SF					
	T-950	Ch	156	192	*46,000		11,405	11.00x22.5	11.00x22.5	Own	EDM	8-4½x3¾	477	G	260-3600	430	Spi	6352	5	1	Eat	38D	SF					
	T-950	Ch	156	192	*46,000		11,405	11.00x22.5	11.00x22.5	Own	EDN	8-4½x4 13/64	534	G	277-3400	490	Spi	6352	5	1	Eat	38D	SF					
FWD	6-407	Ch	162	211	40,000		12,400	9.00x20	9.00x20	Int	RD501	6-4½x5¼	501	G	212-3000	444	Int	T70	5	1	Own	6-23	SF	Own	22		AH	673
	6-406D	Ch	184	233	40,000		14,250	9.00x20	9.00x20	GM	6-71	6-4¼x5	426	D	227-2250	570	Ful	5C72	5	1	Own	6-23	SF	Own	22		AH	673
	6-409D	Ch	184	233	40,000		15,150	9.00x20	9.00x20	Cum	NH220	6-5⅛x6	743	D	220-2100	607	Ful	5C72	5	1	Own	6-23	SF	Own	22		AH	673
	6-457	Ch	162	211	45,000		13,550	10.00x20	10.00x20	Int	RD501	6-4½x5¼	501	G	212-3000	444	Int	T70	5	1	Own	6-23	SF	Own	22A		A	1152
	6-456D	Ch	184	233	45,000		15,270	10.00x20	10.00x20	GM	6-71	6-4¼x5	426	D	227-2250	570	Ful	5C72	5	1	Own	6-23	SF	Own	22A		A	1152
	6-459D	Ch	184	233	45,000		15,350	10.00x20	10.00x20	Cum	NH220	6-5⅛x6	743	D	220-2100	607	Ful	5C72	5	1	Own	6-23	SF	Own	22A		A	1152
	6-467	Ch	162	211	46,000		13,650	10.00x20	10.00x20	Int	RD501	6-4½x5¼	501	G	212-3000	444	Int	T70	5	1	Own	6-33AR	SF	Own	22		A	1152
	6-466D	Ch	184	233	46,000		15,370	10.00x20	10.00x20	GM	6-71	6-4¼x5	426	D	227-2250	570	Ful	5C72	5	1	Own	6-33AR	SF	Own	22		A	1152
	6-469D	Ch	184	233	46,000		15,450	10.00x20	10.00x20	Cum	NH220	6-5⅛x6	743	D	220-2100	607	Ful	5C72	5	1	Own	6-33AR	SF	Own	22		A	1152
	6-487	Ch	162	211	48,000		14,000	10.00x20	10.00x20	Int	RD501	6-4½x5¼	501	G	212-3000	444	Int	T70	5	1	Own	6-33AR	SF	Own	22A		A	1152
	6-486D	Ch	184	233	48,000		15,720	10.00x20	10.00x20	GM	6-71	6-4¼x5	426	D	227-2250	570	Ful	5C72	5	1	Own	6-33AR	SF	Own	22A		A	1152
	6-489D	Ch	184	233	48,000		15,800	10.00x20	10.00x20	Cum	NH220	6-5⅛x6	743	D	220-2100	607	Ful	5C72	5	1	Own	6-33AR	SF	Own	22A		A	1152
	6-607	Ch	178	233	60,000		16,600	12.00x20	12.00x20	Int	RD501	6-4½x5¼	501	G	212-3000	444	Ful	10FA65	10	2	Own	6-33	SF	Own	32		A	1152
	6-606D	Ch	192	216	60,000		18,820	12.00x20	12.00x20	GM	6-71	6-4¼x5	426	D	227-2250	570	Ful	10A1120	10	2	Own	6-33	SF	Own	32		A	1152
	6-609D	Ch	192	216	60,000		18,900	12.00x20	12.00x20	Cum	NH220	6-5⅛x6	743	D	220-2100	607	Ful	10A1120	10	2	Own	6-33	SF	Own	32		A	1152
	408	Ch	142	211	40,000		13,900	12.00x20	12.00x20	Wau	145GK	6-5¼x6	779	G	216-2000	595	Ful	10A1120	10	2	Own	33	SF	Own	32		AH	640
	409	Ch	142	211	40,000		13,970	12.00x20	12.00x20	Wau	145GKB	6-5¼x6	779	G	240-2400	595	Ful	10A1120	10	2	Own	33	SF	Own	32		AH	640
	406D	Ch	142	211	40,000		14,630	12.00x20	12.00x20	GM	6-71	6-4¼x5	426	D	227-2250	570	Ful	10A1120	10	2	Own	33	SF	Own	32		AH	640
	409D	Ch	142	211	40,000		14,800	12.00x20	12.00x20	Cum	NH220	6-5⅛x6	743	D	220-2100	607	Ful	10A1120	10	2	Own	33	SF	Own	32		AH	640
	6-609	Ch	192	216	60,000		18,090	12.00x20	12.00x20	Wau	145GKB	6-5¼x6	779	G	240-2400	595	Ful	10A1120	10	2	Own	6-33	SF	Own	32		AH	640
	T647	Ch	160		40,000	68,000	11,275	10.00x20	10.00x20	Int	RD501	6-4½x5¼	501	G	212-3000	444	Ful	R46	8	2	Own	23PT	SF	Own	22		A	1152
	T644D	Ch	160		40,000	68,000	12,075	10.00x20	10.00x20	GM	4-71	4-4¼x5	284	D	150-2300	380	Ful	R46	8	2	Own	23PT	SF	Own	22		A	1152
	T645D	Ch	160		40,000	68,000	12,075	10.00x20	10.00x20	Cum	JT6B	6-4⅛x5	401	D	175-2500	407	Ful	R46	8	2	Own	23PT	SF	Own	22		A	1152
	T6414D	Ch	160		40,000	68,000	12,275	10.00x20	10.00x20	Deu	F8L614	8-4⅜x5½	649	D	186-2300	448	Ful	5C65	5	1	Own	23PT	SF	Own	22		A	1152
	6-507	Ch	162	162	50,000		16,200	11.00x20	11.00x20	Int	RD501	6-4½x5¼	501	G	212-3000	444	Ful	5C65	5	1	Own	6-33AR	SF	Own	22		A	1152
	6-557	Ch	162	162	55,000		16,700	11.00x20	11.00x20	Int	RD501	6-4½x5¼	501	G	212-3000	444	Ful	5C65	5	1	Own	6-33AR	SF	Own	22A		A	1152
	86-707	Ch	166		70,000		17,400	11.00x20	11.00x20	Int	RD501	6-4½x5¼	501	G	212-3000	444	Int	T70	5	1	Own	6-33AR	SF					
GMC	W550	Ch	146	194	43,000	60,000		10.00x22.5	10.00x22.5	GM	370	8-4x3 11/16	371	G	232-4200	355			5	1			SF				A	
	MW550	Ch	146	194	43,000	60,000		10.00x22.5	10.00x22.5	GM	370	8-4x3 11/16	371	G	232-4200	355			6				SF				A	
	FW550	Ch	139	175	43,000	60,000		10.00x22.5	10.00x22.5	GM	370	8-4x3 11/16	371	G	232-4200	355			5	1			SF				A	
	FMW550	Ch	139	175	43,000	60,000		10.00x22.5	10.00x22.5	GM	370	8-4x3 11/16	371	G	232-4200	355			6				SF				A	
	W630	Ch	153	201	43,000	65,000		10.00x22.5	10.00x22.5	GM	503	6-4 9/16x5⅛	503	G	217-3000	455			8				DF				A	
	FW660	Ch	148	164	43,000	70,000		10.00x22.5	10.00x22.5	GM	503	6-4 9/16x5⅛	503	G	217-3000	455			10				DF				A	
	DW950	Ch	182	224	43,000	76,000		11.00x22.5	11.00x22.5	GM	6-71	6-4¼x5	426	D	236-2100	630			5	1			WF				A	
	W660	Ch	165	201	46,000	70,000		11.00x22.5	11.00x22.5	GM	503	6-4 9/16x5½	503	G	217-3000	455			10				WF				A	
	DW660	Ch	165	201	46,000	60,000		11.00x22.5	11.00x22.5	GM	4-71	4-4¼x5	284	D	152-2300	374			10				WF				A	
	W670	Ch	177	191	59,000	90,000		11.00x22.5	11.00x22.5	GM	503	6-4 9/16x5⅛	503	G	217-3000	455			5	1			WF				A	
	DW970	Ch	182	224	59,000	90,000		11.00x22.5	11.00x22.5	GM	6-71	6-4¼x5	426	D	236-2100	630			5	1			WF				A	
International	65 (10F)	EDT	158		77,840		41,840	13.00x25	16.00x25	Cum	NT6B1	6-5⅛x6	743	D	250-2100	695	Ful	10F1220	10	2	Own		SF	Shu			A	915
	95 (F9)	EDT	165		97,100		49,100	14.00x25	18.00x25	Cum	NRTO6B1	6-5⅛x6	743	D	335-2100	895	Ful	R1150	9	2	Own		SF	Tim	FU900		A	1140
	95 (AC)	EDT	165		99,100		51,100	14.00x25	18.00x25	Cum	NRTO6B1	6-5⅛x6	743	D	335-2100	895	All	CBT5640	4	2	Own		SF	Tim	FU900		A	1140
Kenworth	908	Ch			43,000		12,700	10.00x20	10.00x20	Cum	JTB	6-4⅛x5	401	D	180-2400	350	Ful	5A65	15		Tim	R200	HdF					
	909	Ch			45,000		13,900	10.00x20	10.00x20	Cum	JTB	6-4⅛x5	401	D	180-2400	350	Ful	5A65	15		Tim	SQW	WF					
	922	Ch	191	255	42,000		13,800	10.00x20	10.00x20	Cum	NH220	6-5⅛x6	743	D	220-2100	535	BL	8241	15		Tim	R200	DF					
	923	Ch	190	255	45,000		15,000	10.00x20	10.00x20	Cum	NH220	6-5⅛x6	743	D	270-2100	535	BL	8241	15		Tim	SQW	WF					
	924	Ch	190	255	61,000		16,200	10.00x20	10.00x20	Cum	NH220	6-5⅛x6	743	D	220-2100	535	BL	8241	15		Tim	SW456	WF					
	925-HR	Ch	190	255	43,000		14,020	10.00x20	10.00x20S	Cum	NHB600	6-5⅛x6	743	D	220-2100	535	BL	8241	4	1	Tim	GSWQHFRZ	WF					
	929-HR	Ch	175¼	255	45,000		13,700	10.00x20	10.00x20S	HS	590GV3	6-5x7	590	G	232-2800	490	Ful	5C720	5	1	Tim	SQD	WF					
	552	Ch	178		54,000		22,500	13.00x24	13.00x24	Cum	NH220	6-5⅛x6	743	D	220-2100	535	BL	8241	15		Tim	SFD4640	BdF					
	848	Ch	210¾	234¾	65,000		22,800	12.00x24	12.00x24	Cum	NH220	6-5⅛x6	743	D	220-2100	535	BL	8241	15		Tim	SFD4640	BdF					
	849	Ch	210¾	234¾	65,000		22,800	12.00x24	12.00x24	Cum	NH220	6-5⅛x6	743	D	220-2100	535	BL	8241	15		Tim	SFD4640	BdF					
	L-924	Ch	190	255	65,000		16,400	11.00x22	11.00x22	Cum	NH220	6-5⅛x6	743	D	220-2100	535	BL	8241	15		Tim	SFD1640	BdF					
	928	Ch	190	255	42,000		12,500	10.00x20	10.00x20	HS	590GV3	6-5x5	590	G	232-2800	490	Ful	5C72	15		Tim	R200	HdF					
	953	Ch	258		74,000		35,000	21.00x25	21.00x25S	Cum	NHRS6B	6-5⅛x6	743	D	320-2100	868	BL	8241	4	1	Tim	SFH741	HF	Tim	F7902N			
	984	Ch	258		74,000		35,000	21.00x25	21.00x25S	Cum	NHRS6B	6-5⅛x6	743	D	320-2100	868	BL	3241	4	1	Tim	SFH741	HF	Own	2F1			

(For Abbreviations and References, see page 255)

For Directory of the Heavy Duty Truck Manufacturers listed above, see Table of Contents

HEAVY DUTY AND OFF-HIGHWAY TRUCKS—*concluded*

MAKE AND MODEL	Type	WHEELBASE Minimum Standard	WHEELBASE Maximum Standard	WEIGHTS G.V.W.	WEIGHTS G.C.W.	WEIGHTS Chassis with Cab and Body	TIRES Front	TIRES Rear—Dual Unless Noted	ENGINE Make and Model	ENGINE No. of Cylinders—Bore and Stroke	ENGINE Displacement	ENGINE Fuel Used	ENGINE Max. Brake Hp. at R.P.M.	ENGINE Torque (Lb. Ft.)	TRANSMISSION Make and Model	TRANSMISSION Forward Speeds	TRANSMISSION Reverse Speeds	REAR AXLE Make and Model	REAR AXLE Gear and Type	FRONT AXLE Make and Model	SERVICE BRAKES Make	SERVICE BRAKES Actuation	SERVICE BRAKES Total Lining Area (Sq. In.)
KW-Dart 10S	EDT	108	108	39,000		19,000	12.00x20	12.00x20	Cum JS6	6-4⅛x5	401	D	160-2500	360	Ful 5C65	5	1	Tim U200	HF	Tim 27463		A	678
10S-L	EDT	144	144	40,000		20,000	12.00x20	12.00x20	Cum JS6	6-4⅛x5	401	D	160-2500	360	Ful 5C65	5	1	Tim U200P	HF	Tim 27463	BW	A	678
15S-	EDT	156	156	62,500		32,500	13.00x25	13.00x25	Cum HR6	6-5⅛x6	743	D	175-1800	550	Ful 5F1220	5	1	Tim DR400		Shu 18A		A	1004
25S	EDT	132	132	94,950		44,950	14.00x25	18.00x25	Cum NHRS6	6-5⅛x6	743	D	320-2100	800	Ful 4MS1440	4	1	Own D75S	HbF	Tim FU900		A	1325
25S-L	EDT	176	176	95,000		45,000	14.00x25	18.00x25	Cum NHRS6	6-5⅛x6	743	D	320-2100	800	Ful 10F1220	10	2	Own D75S	HbF	Tim FU900	BW	A	1325
30S-L	EDT	176	176	106,600		46,600	16.00x25	18.00x25	Cum NHRS6	6-5⅛x6	743	D	320-2100	800	Ful 10F1220	10	2	Own D75S	HbF	Tim FU900		A	1325
35T	EDT	206	206	139,300		69,300	16.00x25	16.00x25	Cum NRT6	6-5⅛x6	743	D	335-2100	900	Ful 4MS1440	4	1	Own D75S	HbF	Tim FU900	BW	A	2185
35S-L	EDT	200	200	126,000		56,000	18.00x25	18.00x33	Cum NHV1200	12-5⅛x6	1486	D	425-2100	1075	Cot GA966	3	1	Own D100S	HbF	Own TF1800		A	1527
50T	EDT	206	206	180,000		80,000	16.00x25	18.00x25	Cum NHV1200	12-5⅛x6	1486	D	425-2100	1075	Ful 4MS144	4	1	Own D100T	HbF	Own TF1800		A	2185
50S-BDT	BDTr	142[2]	142[2]		165,100	65,100	14.00x25	18.00x25	Cum NHRS6	6-5⅛x6	743	D	320-2100	800	Ful 10F1220	10	2	Own D75S	HbF	Tim FU900	BW	A	2185
70S-BDT	BDTr	156[4]	156[4]		222,500	82,500	18.00x25	18.00x33	Cum NHV12	12-5⅛x6	1486	D	425-	1190	All. CT5840	4	2	Own D100S	HbF	Own TFA		A	2185
6S-UG	US	80	80	30,000		15,000	12.00x20	12.00x20S	Wau 195DLCU	6-4x4	302	D	77-	206	Fu	2	2	Shu T14	F	Tim PS100		H	
10S-UG	US	108	108	40,400		20,400	12.00x20	12.00x20	Cum JN6	6-4⅛x5	401	D	130-	295	All. CRT3331	3	3	Tim U200	HF	Tim 27463		A	678
13S-UG	US	144	144	51,000		25,000	14.00x20	14.00x20S	Her DRX501	6-4½x5¼	501	D	136-2100	380	All. CRT3331	3	3	Tim PS204HX	HR	Tim		A	496
22S-UG	US			87,000		43,000	16.00x20	16.00x20S	Cum NHS6	6-5⅛x6	743	D	290-	775	TD	1	1	Own	F	Own		A	
25S-UG	US	132	132	95,000		45,000	14.00x24	18.00x25	Cum NHRS6	6-5⅛x6	743	D	320-	865	TD	1	1	Own D75S	HbF	Tim FU900		A	1325
Mack LRX	EDT	160		65,000		33,000	12.00x24	14.00x24	Own END673	6-4⅞x6	672	D	170-2100	480	Own	9	2	Own		Own		A	
LVX	EDT	170		85,800		40,800	14.00x24	18.00x25	Cum NHRS6B1	6-5⅛x6	743	D	320-2100	865	Own	8	2	Own		Own		A	
LRSW	EDT	202		120,000		60,000	14.00x24	16.00x25	Cum NHRS6B1	6-5⅛x6	743	D	320-2100	865	Own	8	2	Own		Own		A	
LRVSW	EDT	202		136,000		68,000	16.00x25	16.00x25	Cum NHV12B1	12-5⅛x6	1486	D	450-2100	1240	Own	4	1	Own		Own		A	
B-80X	EDT	158½	158½	46,000			11.00x24		Own EN707C	6-5x6	707	G	232-2100	617	Own	5	1	Own		Own		A	
B-80SX	EDT	165½	165½	55,000			11.00x22		Own EN707C	6-5x6	707	G	232-2100	617	Own	20	4	Own		Own		A	
B-81X	EDT	158½	158½	46,000			11.00x24		Own END673	6-4⅞x6	672	D	170-2100	480	Own	20	4	Own		Own		A	
B-81SX	EDT	165½	165½	55,000			11.00x22		Own END673	6-4⅞x6	672	D	170-2100	480	Own	20	4	Own		Own		A	
B-813X	EDT	158½	158½	46,000			11.00x24		Own ENDT673	6-4⅞x6	672	D	205-2100	560	Own	20	4	Own		Own		A	
B-813SX	EDT	165½	165½	55,000			11.00x22		Own ENDT673	6-4⅞x6	672	D	205-2100	560	Own	20	4	Own		Own		A	
B-8136SX	EDT	174½	174½	55,000			11.00x22		Own ENDT673	6-4⅞x6	672	D	205-2100	560	Own	10	2	Own		Own		A	
B-83SX	EDT	165½	165½	55,000			11.00x22		Cum NH220	6-5⅛x6	743	D	220-2100	606	Own	20	4	Own		Own		A	
B-833SX	EDT	165½	165½	55,000			11.00x22		Cum NT6B	6-5⅛x6	743	D	250-2100	695	Own	20	4	Own		Own		A	
B-85SX	EDT	186½	186½	65,000			12.00x24		Cum NHS6B	6-5⅛x6	743	D	290-2100	775	Own[6]	15	3	Own		Own		A	
B-853SX	EDT	186½	186½	65,000			12.00x24		Cum NTO6B	6-5⅛x6	743	D	262-2100	695	Own[6]	15	3	Own		Own		A	
B-87SX	EDT	186½	186½	65,000			12.00x24		Cum NHRS6B	6-5⅛x6	743	D	320-2100	865	Own[6]	15	3	Own		Own		A	
B-873SX	EDT	186½	186½	65,000			12.00x24		Cum NRT6B	6-5⅛x6	743	D	300-2100	810	Own[6]	15	3	Own		Own		A	
LYSW	EDT	208		158,500		76,460	16.00x25	18.00x25	Cum NHV12B1	12-5⅛x6	1486	D	450-2100	1240	Own	8	2	Own		Own		A	
Marmon-Herrington T806	Ch	156	192	43,000		10,838	11.00x22.5	11.00x22.5	Ford	8-3 51/64x3 21/32	332	G	212-3800	328	Cla 265V	5	1	Tim SLHD	SF				
Oshkosh W-2100M	Ch	160		42,000		16,000	13.00x20	13.00x20	Cum HRF6B	6-5⅛x6	743	D	190-2000	444	Own MT2100	12	3	Own R2100	DF	Own F2100	BW	A	768
W-2500	Ch			90,000		31,500	16.00x25	16.00x25	Cum NHRS6B	6-5⅛x6	743	D	320-2100	865	All. TG602	3	1	Own R2500	DF	Own F2500		A	1260
W-2501	Ch			90,000		31,500	16.00x25	16.00x25	HS 6182R1	6-5¾x7	1091	G	356-2200	1070	All. TG602	3	1	Own R2500	DF	Own F2500		A	1260
W-817	Ch	158	205	40,000		14,400	12.00x20	12.00x20	Cum HRF6B	6-5⅛x6	743	D	190-2000	580	Own MT817	5	1	Own R817	SF	Own F817		Ah	630
W-827	Ch	158	205	40,000		14,600	12.00x20	12.00x20	Cum HRF6B	6-5⅛x6	743	D	190-2000	580	Own MT817	5	1	Own R827	DF	Own F827		Ah	678
WA-906	Ch	160	205	42,000		16,000	13.00x20	13.00x20	Cum HRF6B	6-5⅛x6	743	D	190-2000	580	Own MT906	12	3	Own R906	DF	Own F906		A	768
W-2211	Ch	160	205	44,000		16,500	13.00x20	13.00x20	Wau 145GKB	6-5¼x6	779	G	240-2400	595	Own MT2211	12	3	Own R2211	DF	Own F2211		A	768
W-2206	Ch	160	205	54,000		19,000	13.00x24	13.00x24	HS 6182G1	6-5¾x7	1091	G	332-2200	960	Own MT2206	10	2	Own R2206	DF	Own F2206		A	789
WA-2208	Ch	160	205	44,000		17,500	13.00x20	13.00x20	Cum NH220	6-5⅛x6	743	D	220-2100	606	Own MT2208	12	3	Own R2208	DF	Own F2208		A	768
W-2209	Ch	160	205	54,000		19,500	13.00x24	13.00x24	Cum NHRS6B	6-5⅛x6	743	D	320-2100	865	Own MT2209	10	2	Own R2209	DF	Own F2209		A	789
W-825-6x6	Ch	178	Opt	45,000		17,500	11.00x20	11.00x20	Cont R6602	6-4⅞x5⅜	602	G	218-2600	484	Own MT825	10	2	Tim SFD3020P	DF	Own F825		A	
W-826-6x6	Ch	178	Opt	45,000		19,000	11.00x20	11.00x20	Cum H6B	6-4⅞x6	672	D	160-1800	512	Own MT826	10	2	Tim SFD3020P	DF	Own F626		A	
WC-906	Ch	160		42,000		16,400	13.00x20	13.00x20	Cum NH220	6-5⅛x6	743	D	220-2100	606	Own MT906	12	3	Own R906	DF	Own F906		A	768
18-34	Ch	155		52,000		14,700	14.00x20	10.00x22.5	Int RD501	6-4½x5¼	501	G	212-3000	444	Own MT18	10	2	Tim SLDD	DF	Own F18		Ah	1052
18-38	Ch	156		56,000		15,600	14.00x20	11.00x22.5	Int RD501	6-4½x5¼	501	G	212-3000	444	Own MT18	10	2	Tim SQDD	DF	Own F18		Ah	1206
W-2206-M	Ch	160		62,000		21,000	14.00x24	14.00x24	HS 6182B1	6-5¾x7	1091	G	356-2200	1070	Own MT2206	10	2	Own R2206M	DF	Own F2206M		A	789
W-2209-M	Ch	160		62,000		21,500	14.00x24	14.00x24	Cum NHRS6B	6-5⅛x6	743	D	320-2100	865	Own MT2209	10	2	Own R2209M	DF	Own F2209M		A	789
W-2800	Ch			120,000			18.00x25	18.00x25	Cum NHRS6B	6-5⅛x6	743	D	320-2100	865	All. TG602	3	1	Own R2800	PF	Own F2800		A	
W-2801	Ch			120,000			18.00x25	18.00x25	HS 6182B1	6-5¾x7	1091	G	356-2200	1070	All. TG602	3	1	Own R2800	PF	Own F2800		A	
WA-906-6x6	Ch	208		65,000		23,200	11.00x24	11.00x24	Cum HRF6B	6-5⅛x6	743	D	190-2000	580	Own MT906	12	3	Tim SFD4600P	DF	Own F906		A	
WA-1600	Ch	236		65,000		23,200	11.00x24	11.00x24	Cum NH220	6-5⅛x6	743	D	220-2100	606	Own MT1600	12	3	Tim SFD4600P	DF	Own F1600		A	
45-55	Ch	122		42,000		11,900	14.00x20	11.00x24	Cont T6427	6-4 5/16x4⅞	427	G	169-	342	Own MT55	10	2	Own R55	DF	Own F50		H	716
45-55-JT	Ch	122		42,000		12,800	14.00x20	11.00x24	Cum JT6B	6-4⅛x5	401	D	175-2500	407	Own MT55	10	2	Own R55	DF	Own F50		Ah	716
Peterbilt 381	Ch	194	Opt	44,000			10.00x20	10.00x20	Cum NHB600	6-5⅛x6	743	D	200-2100	500	Spi 8041	12	1	Tim SFD4600	DF	Tim 27463N	BW	A	
Reo A-630	Ch	191	199	42,000		11,510	10.00x22.5	10.00x22.5	Own OV207	8-3⅞x4⅛	390	G	207-3400	354	Ful 5A65	5	1	Tim SLHD	HhF	Tim FD900		A	992
A-730	Ch	151	199	46,000		12,755	11.00x22.5	11.00x22.5	Own OV207	8-3⅞x4⅛	390	G	207-3400	354	Ful 5A65	5	1	Eat 38DP	SF	Tim FD900		A	1189

	A-633	Ch	145		42,000		11,825	10.00x22.5	10.00x22.5	Own	OV207	8-3 7/8x4 1/8	390	G	207-3400	354	Ful	R46	8		Tim	SLHD	HF	Tim	FD900		A	862
	A-633D	Ch	145		42,000		12,430	10.00x22.5	10.00x22.5	Cum	JT6B	6-4 1/8x5	401	D	175-2500	412	Ful	R46	8		Tim	SLHD	HF	Tim	FD900		A	862
	AC-633	Ch	130		42,000		12,190	10.00x22.5	10.00x22.5	Own	OV207	8-3 7/8x4 1/8	390	G	207-3400	354	Ful	R46	8		Tim	SLHD	HF	Tim	FD900		A	862
	AC-633D	Ch	136		42,000		12,990	10.00x22.5	10.00x22.5	Cum	JT6B	6-4 1/8x5	401	D	175-2500	412	Ful	R46	8		Tim	SLHD	HF	Tim	FD901		A	862
	A-733	Ch	145		45,000		13,005	11.00x22.5	11.00x22.5	Own	OV207	8-3 7/8x4 1/8	390	G	207-3400	354	Ful	R46	8		Eat	38DS	SF	Tim	FD900		A	1189
	AC-733	Ch	130		45,000		13,370	11.00x22.5	11.00x22.5	Own	OV207	8-3 7/8x4 1/8	390	G	207-3400	354	Ful	R46	8		Eat	38DS	SF	Tim	FD900		A	1189
	C-430	Ch	150		42,000		10,750	10.00x22.5	10.00x22.5	Own	OH170	6-4 1/8x4 1/8	331	G	170-3400	297	Cla	290V	5	1	Tim	SLHD	HF	Tim	FD901		H	938
	C-436	Ch	150		47,000		11,360	10.00x22.5	10.00x22.5	Own	OH170	6-4 1/8x4 1/8	331	G	170-3400	297	Cla	290V	5	1	Tim	SLHD	HF	Tim	27461		A	914
	C-440	Ch	150		43,000		12,575	10.00x22.5	10.00x22.5	Own	OH170	6-4 1/8x4 1/8	331	G	170-3400	297	Cla	290V	5	1	Tim	SLD	DdF	Tim	F2090		A	908
	C-442	Ch	150		50,000		13,570	10.00x22.5	10.00x22.5	Own	OH170	6-4 1/8x4 1/8	331	G	170-3400	297	Cla	290V	5	1	Tim	SQD	DdF	Tim	F233		A	1028
	C-530	Ch	155		46,000		12,287	11.00x22.5	11.00x22.5	Own	OH170	6-4 1/8x4 1/8	331	G	170-3400	297	Cla	290V	5	1	Eat	36M	SF	Tim	FE900		A	1189
	C-536	Ch	155		50,000		12,567	11.00x22.5	11.00x22.5	Own	OH170	6-4 1/8x4 1/8	331	G	170-3400	297	Cla	290V	5	1	Eat	36M	SF	Tim	27461		A	1165
	B-630D	Ch	179¾	242¾	42,000		13,835	10.00x22.5	10.00x22.5	Cum	NH180	6-4 7/8x6	672	D	180-2100	475	Spi	6452	5	1	Tim	SLHD	HF	Tim	FD901		A	862
	B-632D	Ch	179¾	242¾	47,000		13,895	10.00x22.5	10.00x22.5	Cum	NH180	6-4 1/8x6	672	D	180-2100	475	Spi	6452	5	1	Tim	SLHD	HF	Tim	FG900		A	873
	B-730D	Ch	188¾	242¾	48,000		15,160	11.00x22.5	11.00x22.5	Cum	NH180	6-4 7/8x6	672	D	180-2100	475	Ful	5C72	5	1	Eat	38DS	SF	Tim	FE900		A	1204
	B-732D	Ch	188¾	242¾	52,000		15,360	11.00x22.5	11.00x22.5	Cum	NH180	6-4 7/8x6	672	D	180-2100	475	Ful	5C72	5	1	Eat	38DS	SF	Tim	FG900		A	1215
	B-830D-OH	Ch	188¾	242¾	60,000		17,875	11.00x24	11.00x24	Cum	NH180	6-4 7/8x6	672	D	180-2100	475	Ful	5C72	5	1	Eat	42M	DdF	Tim	FG900		A	1273
	C-432	Ch	150		43,000		11,040	10.00x22.5	10.00x22.5	Own	OH170	6-4 1/8x4 1/8	331	G	170-3400	297	Cla	290V	5	1	Tim	SLHD	HF					
	B-633-D	Ch	179¾		42,000		14,190	10.00x22.5	10.00x22.5	Cum	NH180	6-4 7/8x6	672	D	180-2100	475	Spi	6452	5	1	Tim	SLHD	HF					
	BCL-633-D	Ch	154		43,000		14,400	10.00x22.5	10.00x22.5	Cum	NH180	6-4 7/8x6	672	D	180-2100	475	Ful	R630D	10		Tim	SLHD	HF					
	B-733-D	Ch	188¾		48,000		15,515	11.00x22.5	11.00x22.5	Cum	NH180	6-4 7/8x6	672	D	180-2100	475	Ful	5C72	5	1	Eat	38DS	SF					
	BCL-733-D	Ch	160		48,000		15,425	11.00x22.5	11.00x22.5	Cum	NH180	6-4 7/8x6	672	D	180-2100	475	Ful	R630D	10		Eat	38DS	SF					
Truckstell	F800-4R	Ch	157	225	40,000		10,170	10.00x22.5	10.00x22.5	Ford		8-3 13/16x3 21/64	332	G	190-3800	306	Ford		15		Ford		SF					
	F900-4R	Ch	157	225	48,000		11,640	11.00x22.5	11.00x22.5	Ford		8-3 13/16x3 21/64	332	G	190-3800	306	Ford		15		Ford		SF					
	C9103-4R	Ch	138	205	48,000		10,250	9.00x22.5	9.00x22.5	Chevrolet		8-4x3 3/16	322	G	195-4000	310	Chevrolet		15		Chevrolet		SF					
	C10103-4R	Ch	158	225	48,000		11,000	9.00x22.5	9.00x22.5	Chevrolet		8-4x3 3/16	322	G	195-4000	310	Chevrolet		15		Chevrolet		SF					
Walter	AGR	Ch	138	162	42,000		15,000	12.00x24	12.00x24	Wau	145GKB	6-5 1/4x6	779	G	240-2400	585	Own	FA	6		Own	FCR	DR					
Ward La France	D5T	Ch	180	220	42,000			11.00x20	11.00x20	Cum	HB600	6-4 7/8x6	672	D	150-1800	500	Ful	5C72	15		Tim	SD3010P	DF					
	D5RT	Ch	180	220	42,000			11.00x20	11.00x20	Cum	HR600	6-5 1/8x6	743	D	165-1800	540	Ful	5C72	15		Tim	SD3010P	DF					
	D5NT	Ch	180	220	42,000			11.00x20	11.00x20	Cum	NHB600	6-5 1/8x6	743	D	200-2100	540	Ful	5C72	15		Tim	SW3012PA	WF					

ABBREVIATIONS

1—Or two.
2—Tractor only; drive axle to trailer axle, 30 ft.
3—Two used.
4—Tractor only; drive axle to trailer axle, 33 ft.
6—Own five speed in combination with Brown-Lipe three speed.
A—Air.
AH—Air over hydraulic.
All—Allison Div.
BdF—Bevel gear, double reduction; free floating.
BDTr—Bottom dump, tractor trailer.
BL—Brown-Lipe.
BW—Bendix-Westinghouse.
Ch—Chassis.
Chr—Chrysler Corp.
Cla—Clark Equipment Co.
Cont—Continental Motors Corp.
Cot—Cotta.
Cum—Cummins Engine Co.
D—Diesel oil.
Deu—Deutz (Diesel Energy Corp.)
DF—Double reduction, free floating.
DR—Double reduction.
Eat—Eaton Axle Co.
EDT—End dump truck.
EDTr—End dump, tractor trailer.
F—Full floating.
Fu—Funk.
Ful—Fuller Mfg. Co.
G—Gasoline.
GM—General Motors Corp.
H—Hydraulic.
HbF—Helical and bevel gears, free floating.
HD—Hypoid double reduction.
DdF—Hypoid double reduction, free floating.
Her—Hercules Motors Corp.
HF—Hypoid, full floating.
HhF—Hypoid helical gears, full floating.
HS—Hall-Scott Motors Co.
Hy—Hypoid.
Int—International Harvester Co.
LR—LeRoi Div.
NP—New Process.
Opt—Optional.
PF—Planetary, free floating.
R—Rigid.
S—Single.
SbP—Spiral bevel, planetary.
Sf—Semi-floating.
SF—Spiral bevel, full floating.
Shu—Shuler.
Spi—Spicer Div.
TD—Twin Disc Clutch Co.
Tim—Timken-Detroit Axle Co.
US—Underground shuttle.
Wau—Waukesha Motor Co.
WF—Worm, full floating.

5½% of Trucks in Use Are Combination Tractor-Semitrailer or Trailer

Estimated Distribution of Trucks and Combinations in 1954 by Registered Gross Vehicle Weight

Registered Gross Vehicle Weight	VEHICLE COMBINATIONS: Tractor-semitrailer Number (000)	Tractor-semitrailer Distribution Percent	Truck-trailer Number (000)	Truck-trailer Distribution Percent	TOTAL Number (000)	TOTAL Distribution Percent
6,000 & under	—	—	—	—	5,152	54.47
6,001-8,000	—	—	—	—	909	9.66
8,001-10,000	—	—	—	—	687	7.3
10,001-12,000	—	—	—	—	565	6.0
12,001-16,000	31	.330	3	.030	753	8.0
16,001-20,000	31	.330	1	.010	471	5.0
20,001-24,000	78	.825	6	.060	254	2.7
24,001-30,000	39	.415	9	.100	141	1.5
30,001-40,000	87	.925	4	.040	226	2.4
Over 40,000	205	2.175	24	.260	254	2.7
Total	471	5.000	47	.500	9,412	100.0

Registered Gross Vehicle Weight	SINGLE-UNIT TRUCKS: 2-Axle, 4-Tire Number (000)	2-Axle, 4-Tire Distribution Percent	2-Axle, 6-Tire Number (000)	2-Axle, 6-Tire Distribution Percent	3-Axle Number (000)	3-Axle Distribution Percent
6,000 & under	4,970	52.8	182	1.94	—	—
6,001-8,000	583	6.2	326	3.46	—	—
8,001-10,000	235	2.5	452	4.80	—	—
10,001-12,000	94	1.0	471	5.00	—	—
12,001-16,000	—	—	700	7.44	19	0.200
16,001-20,000	—	—	411	4.36	28	.300
20,001-24,000	—	—	151	1.62	19	.200
24,001-30,000	—	—	65	.68	28	.300
30,001-40,000	—	—	66	.70	69	.735
Over 40,000	—	—	—	—	25	.265
Total	5,882	62.5	2,824	30.00	188	2.000

SOURCE: PUBLIC ROADS, February 1958, U. S. Bureau of Public Roads.

INTEGRAL FRONT-END LOADERS (SHOVEL)

Make	Model	Type	Overall Dimensions: Height—Highest Point, Bucket at Ground Level (In.)	Width (In.): Outside Rear—Tires or Tracks	Width (In.): Outside Front—Tires or Tracks	Length (In.): Bucket on Ground	Length (In.): Bucket at Carrying Position	Wheelbase (In.)	Track Length on Ground (In.)	Weight (lb)—No load, but incl. water, fuel, lubricant	Bucket: Capacity—Heaped (Cu. Yd.)	Capacity—Struck (Cu. Yd.)	Width (In.)	Lifting Capacity (Lb.)	Carrying Capacity (Lb.)	Maximum Dumping Clearance (In.)	Clearance Under Hinge Pin (In.)	Angle of Dump at Maximum Height (Deg.)
Allis-Chalmers	HD-6G	Cr	69	78	78	181			83 11/16	19600	1⅔	1¼	76			96	120	45
	HD-11G	Cr	84	95⅞	95⅞	209			106¼	32000	2⅝	1⅞	95½			114	139	52
	HD-16G	Cr	99½	104	104	232			116	47800	3¾	2⅝	111			122	147	59
	HD-21G	Cr	106	109¼	109¼	254			129⅛	66500	5	3⅓	111			128	160	50
Case	210B	Wh	62½	76	53¾		173½	75¼		5866	1¼			1500				
	310B	Wh	64½	78½	54	168	181	75¼		6081	⅝			1500		108		45
	420	Wh	64½	78½	55½	168	181¾	75¼		6620	1⅝			2000				
	W-5	Wh	68½	66½	68½	173⅜	176⅛	60		8700	1	¾	70	4500	3000	96	121	50
	W-9	Wh	78	89	89	211	221¾	84½		15620	1¾	1¼	90	11000	5500	102	132	53
	W-9	Wh	78	89	89	211	221¾	84½		15620	1¾	1¼	90	11000	5500	102	132	53
	W-10	Wh	87	93¾	93¾	228	234	84½		18120	2	1⅝	94½	12500	6750	102	133	48
	310C, 420C	Cr	63½	59	59	146	156		57	8025	⅝		62⅝	2600		98		56
	520[1]	Cr	63½	61	61	153	162		57	8550	¾		62⅝			106		60
	620[1]	Cr	68½	63	63	165			62⅝		1		62⅝	12600	6200	110		45
	800D	Cr	94	69	69	185			73	20565	1½		81	17440	8150	98⅝		45
	1000D	Cr	94	76	76	197			79	22405	2		81	18700	9300	98		50
Caterpillar	933	Cr	75 13/16	70	70	166		54	74 5/16	16850	1		70	5400		95¼	119 1/16	50
	955	Cr	82⅝	80	80	181¼		60	81⅝	22470	1½		80	8800		100⅛	128⅜	50
	977	Cr	90½	96	96	204½		74	107 13/16	34740	2¼		96	10500		111⅜	144¼	50
Eimco	125	Cr	114	94	94	208	220		95	44000		2¾	94	15000	20000	138	174½	50
	125	Cr	114	94	94	208	220		95	44000		2¾	94	15000	20000	138	174½	50
Euclid	L-7	Wh	60½	42	48	121½	116½	48		4800	7/10	½	48	3000	2000	60		40
Ford	712[1]	Wh	61	69 11/64	69 11/64	155		81½		3800				2500		101		46
International-Drott	T6-425	Cr	67¼	63	63	153			69 13/16	13730	1	9/10	68	8200	4450	98	118	61
	TD6-424	Cr	67¼	63	63	153			69 13/16	14060	1	9/10	68	8200	4450	98	118	61
	TD9-424	Cr	72	77⅛	77⅛	168			75	19087	1½	1 7/10	78	12870	6350	102	125	60
	TD15-420	Cr	81½	94	94	196	208		94½	33235	2¼	1⅞	96	31750	11800	119	144	55
	TD20-420	Cr	85	94	94	238	242		109	44040	3	2⅜	96	38300	14050	126	156	50
Michigan	12B[1]	Wh	61	42¼	47⅝	122¼	120	51		6110	¾	½	50	3000	1500	60		49
	75B[1]	Wh	80	69	77½	196	202	75		11460	1¼	1	79	7000	3500	114		55
	75R[1]	Wh	80	77½	75	196	202	75		12210	1¼	1	79	8000	4000	114		55
	75A[1]	Wh	80	82	80	196	202	75		13250	1¼	1	79	8000	4000	114		55
	125A[1]	Wh	86	86⅛	86⅛	224	218	80		19475	2	1¾	91	11000	5500	125		54
	175A[1]	Wh	94	97½	97½	236	242	88		25320	2¼	2¼	97	15000	7500	134		56
	85A	Wh	80	77½	75	199	205	75		15310	1¾	1½	79	8000	6000	96	115	55
	275A	Wh	126	123	123	288	296	106		45000	4	3¼	126	22000	22000	114	162	56
	375A	Wh	133	136	136	312	310	122½		61000	6	5	138	30000	30000	123	162	56
Oliver	OC-46	Cr	55⅞[2]	56	56	144			56⅛		⅝		58				113	45
	OC-46	Cr	55⅞[2]	56	56	144			56⅛		⅝		58				113	45
	OC-126	Cr	66¾[2]	73	73	165½	185		71½	17205	1½		80			92½	124½	45
	OC-126	Cr	66¾[2]	73	73	165½	185		71½	17555	1½		80			92½	124½	45
	OC-156	Cr	67½[2]	90	90	188			87⅛	26525	2¼		96				132	48
Payloader	HA	Wh	58	44	51	123	120	48		5050	⅔	½	48	3000	2000	62½	78	40
	HA	Wh	58	44	51	123	120	48		5285	⅔	½	48	3000	2000	62½	78	40
	H-25	Wh	62	42	49	123	119	48		6150	2¼	1⅞	52		2500	64½	79	40
	H-25	Wh	62	42	49	123	119	48		6250	2¼	1⅞	52		2500	64½	79	40
	HAH	Wh	74	62	65½	170	167	60		9600	1	⅞	72	4000	3000	96	120	42
	HF	Wh	74	77	67	190	192½	68½		11980	1	¾	60	4000	3000	96	119	50
	HU	Wh	89	80	80	201	197	82		14500	1¼	1	78	9000	5000	94	121	50
	HU	Wh	89	80	80	201	197	82		14675	1¼	1	78	9000	5000	94	121	50
	H-70	Wh	84	86	86	216	211	85		17530	2	1¾	90	11000	7000	108	137	55
	H-70	Wh	84	86	86	216	211	85		18100	2	1¾	90	11000	7000	108	137	55
	H-70	Wh	84	86	86	216	211	85		18100	2	1¾	90	11000	7000	108	137	55
	H-90	Wh	99	95	95	233	228	91		23220	2⅜	2	90	15000	9000	118	151	54
	H-90	Wh	99	95	95	233	228	91		24070	2⅜	2	90	15000	9000	118	151	54
	H-90	Wh	99	95	95	233	228	91		24070	2⅜	2	90	15000	9000	118	151	54
	H-90	Wh	99	95	95	233	228	91		24750	2⅜	2	90	15000	9000	118	151	54
	12	Cr	90	75	75	198	193		75	22400	1¾	1⅓	84			106	136	50
Pettibone Speedall	125	Wh	94¼	82	76	224	233	84		15950	1½	1¼	76	11000	5500	98	130	48
	125D	Wh	94¼	82	76	224	233	84		16050	1½	1¼	76	11000	5500	98	130	48
	175	Wh	95	89	87½	234	243	89		20250	2¼	1¾	85	15000	7500	106	139½	50
	175D	Wh	95	89	87½	234	243	89		20310	2¼	1¾	85	15000	7500	106	139½	50
	250D	Wh	96	98	97	249½	244	89		26000	3¼	2½	96	21000	10500	106	144	50
	250D	Wh	96	98	97	249½	244	89		26000	3¼	2½	96	21000	10500	106	144	50
Scoopmobile	H	Wh	94		82	199	195	113		10150	1¼	1	79	8000	4000	108	141	45
	HP[1]	Wh	94		82	199	195	113		10500	1¼	1	79	9000	5000	108	141	45
	LD5P[1]	Wh	84	78	78	246	232	99		13200	1½	1¼	86	8000	5000	108	141	45

Make	Model	Bucket: Raising Time—Loaded (Sec.)	Lowering Time (Sec.)	Track—Width of Shoe (In.)	Engine: Make	Engine: Model	Brake Horsepower	Type of Fuel	Transmission: Type	No. of Forward Speeds	No. of Reverse Speeds	Max. Forward Speed (Mph.)	Max. Reverse Speed (Mph.)	Brake Type	Maximum Drawbar Pull (Lb.)
Allis-Chalmers	HD-6G			13	Onn	HD344	72	D	Conv	4	2	5.5	4.1	M	15970
	HD-11G			16	Own	HD516	111	D	Conv	6	3	5.7	4.4	M	26910
	HD-16G			20	Own	16000	150	D	TC	3	2	7.2	5.5	M	60000
	HD-21G			22	Own	21000	225	D	TC	2	1	8.0	6.0	M	70000
Case	210B	6.5	4.0		Own	G126	34	G	Conv	8	8	16.1	20.0	M	
	310B	6.5	4.0		Own	G148	42	G	Conv	8	8	16.3	20.1	M	4186
	420	4.7	3.3		Own	G148	47	G	Conv	8	8	17.7	22.0	M	
	W-5	6.5	4.0		Own	G164	57	G	Aut	4	4	18.0	23.0	M	5650
	W-9	7.5	4.0		Own	700	65¾	D	Aut	3	3	21.0	21.0	H	12500
	W-9	7.5	4.0		Own	700	69½	G	Aut	3	3	21.0	21.0	H	12500
	W-10	7.5	7.5		Own	900	100	D	Aut	3	3	21.0	21.0	H	14500
	310C, 420C	6.0	3.0	11	Own	G148	42	G	Conv	3	1	4.5	2.0	M	5380
	520[1]	8.0	3.0	13	Cont	FA162	50	G	Conv	3	1	4.9	2.2	M	11200
	620[1]	9.0	5.0	14	Cont	F209	62	G	TC	4	4	6.5	7.2	H	15860
	800D	7.0	5.0	15	Cont	HD277	80	D	TC	4	4	6.0	7.2	H	20700
	1000D	7.1	4.8	16	Cont	JD382	100	D	TC	4	4	6.0	7.2	H	25400
Caterpillar	933	7.0	2.0	12	Own		50	D	Conv	4	2	6.1	3.1	M	
	955	7.0	3.0	15	Own		70	D	Conv	4	2	6.9	3.0	M	
	977	9.1	3.5	18	Own		100	D	Conv	5	4	7.6	6.0	M	
Eimco	125	8.6	3.6	20	Cum	NHCB1400	125	D	Aut	2	2	55.0	55.0	M	46000
	125	8.6	3.6	20	GM	4080	143	D	Aut	2	2	55.0	55.0	M	46000
Euclid	L-7	5.0	5.0		Cont	F162	49	G	SA	2	2	11.0	11.0	H	
Ford	712[1]				Own		61	G	Conv						
International-Drott	T6-425	6.7	5.0	12	Own	C281	55	G	Conv	4	2	6.1	3.9	M	8610
	TD6-424	6.7	5.0	12	Own	D281	55	D	Conv	4	2	6.1	3.9	M	8670
	TD9-424	7.7	5.6	15	Own	D350	71	D	Conv	4	2	6.3	4.2	M	11680
	TD15-420	5.0	4.0	18	Own	554	115	D	Conv	6	6	5.8	7.1	M	20500
	TD20-420	5.5	4.5	18	Own	691	134	D	Conv	6	6	7.0	8.4	M	27500
Michigan	12B[1]	7.9	3.9		Wau	180GLB	44	G	PS	2	1	11.2	10.5	H	2000
	75B[1]	7.0	5.0		Wau	190GL	77	G	PS	4	4	26.0	26.0	H	4000
	75R[1]	7.0	5.0		Wau	190GL	77	G	PS	4	4	26.0	26.0	H	4000
	75A[1]	7.0	5.0		Wau	190GL	77	G	PS	4	4	26.0	26.0	H	6000
	125A[1]	9.2	6.0		Wau	195GK	106	G	PS	4	4	24.0	24.0	H	14000
	175A[1]	9.0	4.0		Wau	135GK	127	G	PS	4	4	24.0	24.0	H	18000
	85A	7.2	5.0		Wau	197DLC	91	D	Aut	4	4	26.0	26.0	H	13000
	275A	9.0	6.0		Cum	NTO6BI	262	D	Aut	4	4	28.0	28.0	A	40000
	375A	11.0	7.0		Cum	NRTO6BI	375	D	Aut	4	4	25.0	25.0	A	50000
Oliver	OC-46	6.0	4.5	10	Own	GD130	130	G	Conv	4	1	5.3	1.8	M	4410
	OC-46	6.0	4.5	10	Own	DD130	130	D	Conv	4	1	5.3	1.8	M	4440
	OC-126	8.5	6.3	13	Own	JXLD	339	G	Conv	4	2	5.3	3.6	M	10399
	OC-126	8.5	6.3	13	Own	DJXC	298	D	Conv	4	2	5.3	3.6	M	11333
	OC-156	8.0	6.0	16	Own	DRXC	529	D	Conv	4	2	5.6	4.5	M	17218
Payloader	HA	5.0	7.0		Wau	FC	33	G	TC	2	2	6.3	10.2	H	
	HA	5.0	7.0		Wau	180DLC	38	D	TC	2	2	6.3	10.2	H	
	H-25	5.5	3.0		Wau	180GLB	44	G	PS	2	2	11.0	11.0	H	
	H-25	5.5	3.0		Wau	180DLC	42	D	PS	2	2	11.0	11.0	H	
	HAH	5.0	3.5		Her	JX4C3	51	G	PS	4	4	17.7	29.8	H	
	HF	8.3	4.5		Her	QXD3	66½	G	PS	4	4	19.5	28.7	H	
	HU	6.0	3.0		Her	JXC	84	G	PS	3	3	18.0	24.0	H	
	HU	6.0	3.0		Her	DIX6-272	84	D	PS	3	3	18.0	24.0	H	
	H-70	7.0	4.5		Int	U372	110	G	PS	3	3	22.0	28.0	H	
	H-70	7.0	4.5		Cum	JF6BI	110	D	PS	3	3	22.0	28.0	H	
	H-70	7.0	4.5		GM	3-71	105	D	PS	3	3	22.0	28.0	H	
	H-90	10.0	4.5		Her	WXLC3	125	G	PS	3	3	23.9	24.6	H	
	H-90	10.0	4.5		Cum	JN6BI	122	D	PS	3	3	23.9	24.6	H	
	H-90	10.0	4.5		GM	4-71	143	D	PS	3	3	23.9	24.6	H	
	H-90	10.0	4.5		Cum	JT6BI	162	D	PS	3	3	23.9	24.6	H	
	12	11.6	8.7	15	Int	UD350	91½	D	PS	3	3	10.0	11.6	H	22400
Pettibone Speedall	125	6.0	5.0		Her	GO339	109	G	TC	4	4	18.3	22.6	H	9570
	125D	6.0	5.0		Her	DD339	106	D	TC	4	4	18.3	22.6	H	9630
	175	7.0	5.0		Her	WXLC3	124	G	TC	4	4	19.1	23.5	H	12150
	175D	7.0	5.0		GM	3-71	105	D	TC	4	4	19.1	23.5	H	12186
	250D	9.5	7.0		GM	4-71	147	D	TC	4	4	19.7	24.3	H	15600
	250D	9.5	7.0		Cum	JNS6BI	165	D	TC	4	4	19.7	24.3	H	15600
Scoopmobile	H	7.0	5.0		Chr	Ind 6	120	G	Conv	4	4	20.0	20.0	H	7500
	HP[1]	7.0	5.0		Chr	Ind 6	120	G	SA	4	4	20.0	20.0	H	7500
	LD5P[1]	4.5	3.0		Chr	Ind 6	120	G	PS	4	4	25.0	25.0	H	9500

LD7[1]	Wh	99	80	80	255	246	106	......	16140	1⅞	1⅝	86	12000	7000	108	144	45	7.0	4.0	....	Wau 195GK	106	G	PS	3	3	23.0	23.0	H	12000
LD7A[1]	Wh	101	92	92	257	240	107	......	22500	2½	2¼	98	15000	9000	84	148	45	7.0	4.0	....	Wau 135GK	132	G	PS	3	3	23.0	23.0	H	15000
LD8AD	Wh	101	101	101	298	286	137	......	32000	3½	3	98	25000	15000	120	166	45	10.0	5.0	....	Cum JNS6	175	D	PS	4	4	25.0	25.0	A	27000
LD12AD	Wh	125	106	106	300	288	147	......	44000	4¼	3½	108	30000	20000	120	168	45	7.0	7.0	....	Cum NTO	262	D	PS	4	4	20.0	20.0	A	37500
Tractomotive TL-6	Wh	64	45	53	115	121	48	......	6100	½	7/16	52	3000	2100	53	72	51	5.0	5.0	....	AC B125	33¾	G	TC	2	2	8.0	14.0	H	......
TL-6D	Wh	64	45	53	118	126	48	......	6500	½	7/16	52	3000	2100	53	72	51	5.0	5.0	....	AC 4DA153	38	D	TC	2	2	8.0	14.0	H	......
TL-10	Wh	74		73½	163	168	72	......	11900	1	⅞	75½	......	......	96	120	42	7.0	5.0	....	AC G226	63	G	TC	4	4	18.0	28.5	H	......
TL-11	Wh	75½	77	......	177	184	84	......	11300	1⅛	1	75½	......	......	97	123	42	7.0	6.0	....	AC G226	63	G	TC	4	4	20.0	25.0	H	......
TL-11D	Wh	75½	77	......	177	184	84	......	11500	1⅛	1	75½	......	......	97	123	42	7.0	6.0	....	AC 6DA273	77	D	TC	4	4	20.0	25.0	H	......
TL-12	Wh	75½	81½	......	178	185	81	......	12100	1⅛	1	75½	......	......	96	121	45	7.0	6.0	....	AC G226	63	G	TC	4	4	20.0	25.0	H	......
TL-12D	Wh	75½	81½	......	178	185	81	......	12300	1⅛	1	75½	......	......	96	121	45	7.0	6.0	....	AC 6DA273	77	D	TC	4	4	20.0	25.0	H	......
TL-16	Wh	81	84½	84½	210	209	87	......	15850	1¾	1 7/16	85	14000	......	109	138	48	8.2	6.0	....	Her 6GO339	101	G	PS	3	3	27.0	27.0	H	......
TL-16D	Wh	81	84½	84½	210	209	87	......	15850	1¾	1 7/16	85	14000	......	109	138	48	8.2	6.0	....	Her 6DD339	97	D	PS	3	3	27.0	27.0	H	......
TL-20D	Wh	86	92	......	219	217	93	......	22100	2	1⅔	88	20000	......	108	139	45	8.5	6.0	....	AC 4DI344	104	D	PS	3	3	22.6	23.4	H	......
Trojan T-18	Wh	62	50	47½	123	117	48	......	6500	⅔	....	50	4750	2500	72	82½	47	5.7	......	....	Chr Ind 30	72	G	Aut	....	....	13.0	13.0	....	......
LHM-75[1]	Wh	77	77	76	197	194	81	......	12000	1¼	1	78	5000	3600	97	121½	40	5.5	5.5	....	Her JX4D	62	G	Aut	5	5	23.0	27.0	MD	8400
104[1]	Wh	77	88	88	206¼	204	92	......	15000	1¼	1	90	8000	4000	102	122½	40	6.6	5.5	....	Her GO260	84	G	PA	3	3	21.0	21.0	H	10500
124	Wh	77	88	88	210	208	92	......	15100	1½	1¼	90	10000	5000	101	123	40	6.5	5.5	....	Her GO298	96	G	PA	3	3	21.0	21.0	H	10570
154[1]	Wh	79	89	89	217	215	92	......	17500	2	1⅝	90	12000	6000	108	129¾	40	8.0	7.0	....	Her GO339	109	G	PA	3	3	21.0	21.0	H	12250
404	Wh	110	117	117	294	290	99½	......	41500	4	3	120	30000	12000	126	161	50	8.5	7.5	....	GM 6055C	240	D	PA	3	3	20.0	20.0	A	29050

ABBREVIATIONS
1—Diesel engine also available.
2—Not including exhaust pipe.
A—Air.
AC—Allis-Chalmers Mfg. Co.
Aut—Automatic.
Chr—Chrysler Corp.
Cont—Continental Motors Corp.
Conv—Conventional.
Cr—Crawler.
Cum—Cummins Engine Co.
D—Diesel fuel.
G—Gasoline.
GM—General Motors Corp.
H—Hydraulic.
Her—Hercules Motors Corp.
M—Mechanical.
MD—Multiple disc.
PA—Planetary automatic.
PS—Power shift.
SA—Semi-automatic.
TC—Torque converter.
Wau—Waukesha Motor Co.
Wh—Wheel.

DUMPERS • REAR, BOTTOM, FRONT

MAKE AND MODEL			WEIGHTS (Lbs.)		CAPACITIES			ENGINE						TRANSMISSION										TIRES (Size and Ply)		OVERALL DIMENSIONS		
															Ratios (To 1)													
Make	Model	Type	Complete Unit—No Load	Complete Unit—Incl. Payload	Struck (Cu. Yds.)	Heaped (Cu. Yds.)	Payload (Tons)	Make and Model	No. of Cylinders—Bore and Stroke (In.)	Displacement (Cu. In.)	Brake Horsepower at R.P.M.	Maximum Torque at R.P.M.	Fuel Used	Type	First	Second	Third	Fourth	Fifth	Reverse	Clutch Type	Steering Type	Front	Rear	Length	Width	Height
Allis-Chalmers	TR-260	RD	44870	84870	11.0	15.0	20.0	Own 16000	6-5¼x6½	844.3	230-2000	......	D	Conv	6.54	3.36	1.75	1.00	N	5.06	SPD	Hyd	26.5x25-20	26.5x25-20	27'5"	11'6"	10'5"
	TW-360	BD	47000	99000	17.0	24.0	28.0	Own TDS844	6-5¼x6½	844.0	280-2100	......	D	Conv	6.54	3.27	1.76	1.00	N	6.49	SPD	Hyd	24x29-24	24x29-24	35'11½"	11'7"	10'6⅛"
Curtiss-Wright	CWD-214	RD	44400	94400	14.0	21.0	25.0	Cum HRS6	6-5⅛x6	743.0	240-	753-	D	Conv	6.53	4.97	3.92	2.99	2.30	5.03	......	Hyd	29.5x25-22	29.5x25-24	28'11"	11'6"	11'4"
	CWD-221	RD	69800	139800	21.0	31.0	35.0	GM 6-110T	6-5x5 19/32	660.0	375-	1020-	D	Aut	4.00	2.01	1.00	.67	N	5.12	......	Hyd	33.5x33-32	33.5x33-32	35'5"	11'10"	11'4"
	CWD-321	RD	64000	134000	21.0	31.0	35.0	Cum NRT6	6-5⅛x6	743.0	300-	810-	D	Conv	9.20	6.88	4.94	3.55	2.59	11.76	......	Hyd	29.5x29-28	29.5x29-40	35'3"	11'10"	11'4"
Euclid	FDT	BD	36300	76300	13.0	19.0	20.0	GM 6-71	6-4¼x5	426.0	218-2100	570-1600	D	Conv	6.54	3.36	1.75	1.00	.640	5.06	SPD	Hyd	12x25-14	24x25-18	39'11"	10'9"	9'7½"
	TDT	BD	45500	97500	17.0	25.5	26.0	GM 6-110	6-5x5 19/32	660.0	300-2000	850-1400	D	Aut	......	......	......	N	N	......	TC	Hyd	14x25-16	24x25-24	45'½"	10'9"	10'3½"
	TDT	BD	44800	96800	17.0	25.5	26.0	Cum NRT6B1	6-5⅛x6	743.0	300-2100	810-1500	D	Aut	......	......	......	N	N	......	TC	Hyd	14x25-16	24x25-24	45'½"	10'9"	10'3½"
	LDT	BD	60500	138500	25.0	38.5	39.0	GM 6-110	6-5x5 19/32	660.0	325-2000	875-1600	D	Aut	4.00	2.01	1.00	.670	N	(2)	TC	Hyd	14x25-16	27x33-24	48'3½"	11'2"	10'6"
	LDT	BD	60500	138500	25.0	38.5	39.0	Cum NRTO6B1	6-5⅛x6	743.0	335-2100	900-1500	D	Aut	4.00	2.01	1.00	.670	N	(2)	TC	Hyd	14x25-20	27x33-30	48'3½"	11'2"	10'6"
Koehring	W60	FD	16300	32800	5.3	6.3	8.3	GM 4-71	4-4¼x5	......	109-1800	360-1100	D	Conv	65.00	35.50	18.30	N	N	(3)	SPD	Hyd	16x25-16	10x20-12	14'7"	8'4⅝"	8'9½"
	100	FD	31000	61000	8.0	10.0	15.0	GM 6-71	6-4¼x5	426.0	166-2100	555-2100	D	Aut	20.8	7.35	N	N	N	(3)	Hyd	Hyd	21x25-20	12x35-16	19'3"	10'0"	10'10⅝"
Le Tourneau-Westinghouse	D	RD	22300	44300	7.0	10.5	11.0	GM 4-71	4-4¼x5	283.7	138-2000	375-1600	D	Conv	......	......	......	......	......	......	SP	Ele	18x25-16	18x25-16	24'10"	8'0"	9'6"
	C	RD	43800	87800	14.7	22.0	22.0	GM 6-71	6-4¼x5	425.6	226-2100	600-1500	D	Conv[1]	......	......	......	......	......	......	SP	Ele	24x25-24	24x25-24	29'6"	11'3"	11'4"
	C	RD	43800	87800	14.7	22.0	22.0	Cum HS6B1	6-4⅞x6	672.0	210-1800	670-1250	D	Conv[1]	......	......	......	......	......	......	SP	Ele	24x25-24	24x25-24	29'6"	11'3"	11'4"
	B	RD	75300	145300	23.0	31.0	35.0	GM 6-110	6-5x5 19/32	660.0	335-2000	900-1600	D	Conv[1]	......	......	......	......	......	......	DP	Ele	27x33-30	27x33-30	36'7"	12'6"	14'0"
	B	RD	76200	146200	23.0	31.0	35.0	Cum NRTO6B1	6-	743.0	335-2100	900-1500	D	TC	......	......	......	......	......	......	TC	Ele	27x33-30	27x33-30	36'7"	12'6"	14'0"
	D	SD	20000	40000	9.0	12.0	10.0	GM 4-71	4-4¼x5	283.7	138-2000	375-1600	D	Conv	......	......	......	......	......	......	SP	Ele	18x25-16	18x25-16	33'2"	9'4"	7'9"
	C	SD	41045	81045	10.5	13.5	20.0	GM 6-71	6-4¼x5	425.6	210-2000	575-1500	D	Conv[1]	......	......	......	......	......	......	SP	Ele	24x25-24	24x25-24	39'6"	9'3"	8'4"
	C	SD	41045	81045	10.5	13.5	20.0	Cum HS6B1	6-4⅞x6	672.0	210-2000	670-1250	D	Conv[1]	......	......	......	......	......	......	SP	Ele	24x25-24	24x25-24	39'6"	9'3"	8'4"
Michigan	110	RD	31500	57500	8.3	12.0	13.0	Cum JT6B1	6-4½x5	401.0	162-	407-1750	D	PS	......	......	......	......	......	......	TC	Hyd	23.5x25-16	23.5x25-16	27'7⅛"	8'9"	9'10"
Yuba-Movall	RD20, RD21	RD	35000	99000	19.0	25.0	32.0	Cat	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	25'3"	11'0"	10'4"
	RD15	RD	23340	67340	12.0	16.0	22.0	Cat	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	19'0"	10'2"	9'7"
	RD360-AC	RD	35000	99000	19.0	25.0	32.0	AC	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	25'3"	11'0"	10'4"
	RD75-IH	RD	35000	99000	19.0	25.0	32.0	Int	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	25'3"	11'0"	10'4"
	RD55-IH	RD	23340	67340	12.0	16.0	22.0	Int	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	19'0"	10'2"	9'7"

ABBREVIATIONS
1—Torque converter optional.
2—Two reverse speeds.
3—Same as forward ratios.
AC—Allis-Chalmers Mfg. Co.
Aut—Automatic.
BD—Bottom dump.
Cat—Caterpillar Tractor Co.
Conv—Conventional.
Cum—Cummins Diesel Engine Co.
D—Diesel oil.
DP—Double plate.
Ele—Electric.
FD—Front dump.
GM—General Motors Corp.
Hyd—Hydraulic.
Int—International Harvester Co.
N—No or none.
PS—Power shift.
RD—Rear dump.
SD—Side dump.
SP—Single plate.
SPD—Single plate, operating dry.
TC—Torque converter.

POWERED ROLLERS

MAKE AND MODEL		Type	WEIGHTS (Lb.) Without Ballast	WEIGHTS (Lb.) With Water Ballast	COMPRESSIONS lb. in. Face Without Ballast	COMPRESSIONS lb. in. Face With Water Ballast	ENGINE Make and Model	ENGINE No. of Cylinders—Bore and Stroke (In.)	ENGINE Displacement (Cu. In.)	ENGINE Max. Brake Hp. at R.P.M.	TRANSMISSION No. of Forward Speeds	TRANSMISSION No. of Reverse Speeds	TRANSMISSION Range in Forward Speeds (Mph)	Clutch—Type	Steering	DIMENSIONS Rollers—Diam. x Width (In.) Guide	DIMENSIONS Rollers—Diam. x Width (In.) Drive	Rolling Width (In.)	Overall (In.) Length	Overall (In.) Width	Overall (In.) Height	Ground Clearance (In.)	Turning Radius (Ft.)
Austin-Western	3½-8 Ton	PT	6948	10052	101[1]	154[1]	Wis VG4D	4-3½x4	154.0	36-2200	2	2	1.13-4.46	Fr	Hyd	32x40	48x42	42	128½	51⅛	69½	11¼	14'2"
	5-8 Ton	Tan	11623	16523	135[1]	195[1]	Ford J	8-3⅝x3 3/16	272.0	75-1650	2	2	.88-3.30	Fr	Hyd	41x50	53x50	50	176½	63⅝	84½	15½	18'0"
	5-8 Ton	Tan	11623	16523	135[1]	195[1]	GM 2055	2-4¼x5	141.9	60-1750	2	2	.88-3.30	Fr	Hyd	41x50	53x50	50	176½	63⅝	84½	15½	18'0"
	8-12 Ton	Tan	16469	24283	187[1]	268[1]	Ford J	8-3⅝x3 3/16	272.0	75-1650	2	2	.99-3.72	Fr	Hyd	48x54	60x54	54	190	67⅝	88	19	20'0"
	8-12 Ton	Tan	16469	24283	187[1]	268[1]	GM 2055	2-4¼x5	149.9	60-1750	2	2	.99-3.72	Fr	Hyd	48x54	60x54	54	190	67⅝	88	19	20'0"
	10-14 Ton	Tan	20092	27906	254[1]	335[1]	Ford J	8-3⅝x3 3/16	272.0	75-1650	2	2	.99-3.72	Fr	Hyd	48x54	60x54	54	190	67⅝	88	19	20'0"
	10-14 Ton	Tan	20092	27906	254[1]	335[1]	GM 2055	2-4¼x5	149.9	60-1750	2	2	.99-3.72	Fr	Hyd	48x54	60x54	54	190	67⅝	88	19	20'0"
	8-11 Ton	TW	16411	19695	315[1]	366[1]	Ford J	8-3⅝x3 3/16	272.0	75-1650	2	2	.99-3.73	Fr	Hyd	41x40	60x18	67	205	67	78¾	15	18'11"
	8-11 Ton	TW	16411	19695	315[1]	366[1]	GM 2055	2-4¼x5	141.9	60-1750	2	2	.99-3.73	Fr	Hyd	41x40	60x18	67	205	67	78¾	15	18'11"
	8-11 Ton	TW	16411	19695	315[1]	366[1]	Int U406	6-4⅜x4½	405.9	84-1650	2	2	.99-3.73	Fr	Hyd	41x40	60x18	67	205	67	78¾	15	18'11"
	10-12 Ton	TW	20062	25122	328[1]	409[1]	Ford J	8-3⅝x3 3/16	272.0	75-1650	2	2	1.14-4.30	Fr	Hyd	44x44	69x20	75	206½	75	83¼	19½	19'3"
	10-12 Ton	TW	20062	25122	328[1]	409[1]	GM 2055	2-4¼x5	141.9	60-1750	2	2	1.14-4.30	Fr	Hyd	44x44	69x20	75	206½	75	83¼	19½	19'3"
	10-12 Ton	TW	20062	25122	328[1]	409[1]	Int U406	6-4⅜x4½	405.9	84-1650	2	2	1.14-4.30	Fr	Hyd	44x44	69x20	75	206½	75	83¼	19½	19'3"
	12-14 Ton	TW	24040	29600	356[1]	434[1]	Ford J	8-3⅝x3 3/16	272.0	75-1650	2	2	1.14-4.30	Fr	Hyd	44x44	69x24	83	206½	83	83¼	19½	19'3"
	12-14 Ton	TW	24040	29600	356[1]	434[1]	GM 2055	2-4¼x5	141.9	60-1750	2	2	1.14-4.30	Fr	Hyd	44x44	69x24	83	206½	83	83¼	19½	19'3"
	12-14 Ton	TW	24040	29600	356[1]	434[1]	Int. U406	6-4⅜x4½	405.9	84-1650	2	2	1.14-4.30	Fr	Hyd	44x44	69x24	83	206½	83	83¼	19½	19'3"
Browning	SPR-9	RT	6550				Cont F244		244.0	48-1800	4	4	2.00-13.00	TC	Hyd	5-7.50/15	4-7.50/15	68	177½	69	74	9½	19'6"
	SPR-13	RT	8460				Cont F244	6-3 7/16x4⅜	244.0	48-1800	4	4	2.00-13.00	TC	Hyd	7-7.50/15	6-7.50/15	99½	192	100½	74	9½	21'0"
	SPR-13	RT	8460				Cont ED208	4-3 11/16x4⅞	208.0	39-1800	4	4	2.00-13.00	TC	Hyd	7-7.50/15	6-7.50/15	99½	192	100½	74	9½	21'0"
	SPR-9	RT	6550				Cont ED208	4-3 11/16x4⅞	208.0	39-1800	4	4	2.00-13.00	TC	Hyd	7-7.50/15	4-7.50/15	68	177½	69	74	9½	19'6"
Buffalo-Springfield	3-5 Ton	Tan	6450	10510[2]	107[1]	195[3]	Cont[4] Y112	4-4 1/16x3½	112.0				.50-5.30	TC	Hyd	30x38	40x38	38	127	49¼	73½	13	14'6"
	4-6 Ton	PT	8250	12310[2]	138[1]	226[3]	Cont[4] Y112	4-4 1/16x3½	112.0				.50-5.30	TC	Hyd	30x38	40x38	38	137	58¾	73½	13	14'6"
	5-8 Ton Std.	Tan	12200	16100	139[1]	197[1]	Cont[4] F162	4-3 7/16x4⅜	162.4				1.00-5.40	TC	Hyd	40x50	53x50	50	173	66	87	12½	17'10"
	8-10 Ton Std.	Tan	16740	20520	220[1]	265[1]	Cont[4] F162	4-3 7/16x4⅜	162.4				1.00-5.40	TC	Hyd	40x50	53x50	50	173	66	87	12½	17'10"
	8-12 Ton Std.	Tan	16815	24177	186[1]	269[1]	Cont[4] F226	6-3 5/16x4⅜	226.0				1.00-5.60	TC	Hyd	48x54	60x54	54	195	70	93½	14	19'8"
	10-14 Ton Std.	Tan	21140	28177	254[1]	331[1]	Cont[4] F226	6-3 5/16x3⅜	226.0				1.00-5.60	TC	Hyd	48x54	60x54	54	195	70	93½	14	19'8"
	5-8 Ton HD	Tan	12219	16000	153[1]	195[1]	Cont[4] F226	6-3 5/16x4⅜	226.0		4	4	1.10-5.00	Fr	Hyd	40x50	53x50	50	174	66	93	17	17'10"
	8-14 Ton HD	Tan	17065	27495[2]	198[3]	337[3]	Her[4] JXD	6-4x4¼	320.0		4	4	1.10-5.00	Fr	Hyd	48x54	60x54	54	196	72	102	19	19'8"
	10-16 Ton HD	Tan	20865	31295[2]	268[3]	407[3]	Her[4] JXD	6-4x4¼	320.0		4	4	1.10-5.00	Fr	Hyd	48x54	60x54	54	196	72	102	19	19'8"
	3 Axle	TAT	27370	40170[2]			Her[4] JXLD	6-4x4½	339.0		4	4	1.10-5.00	Fr	Hyd	48x54	60x54	54	273	72	102	19	29'8"
	10-14 Ton	TW	20900	27926[2]	368[1]	502[3]	Her[4] JXLD	6-4x4½	339.0		4	4	1.50-5.00	Fr	Hyd	44x44	69x20	76[5]	259	76[5]	80½	15	19'1½"
	12-15 Ton	TW	24200	30820[2]	422[1]	548[3]	Her[4] JXLD	6-4x4½	339.0		4	4	1.50-5.00	Fr	Hyd	44x44	69x20	76[5]	259	76[5]	80½	15	19'1½"
	Kompactor		32000		580		Cat D318G	6-4½x5½	525.0				1.00-5.00	TC		69x23	69x31¾	107	252	107	80	19	26'6½"
	Kompactor		32000		580		GM 4-71	4-4¼x5	283.7				1.00-5.00	TC		69x23	69x31¾	107	252	107	80	19	26'6½"
C. H. & E.	91-A	Tan	2900	4500	53[1]	85[1]	BS 23A	1-	23.0	8-	1	1	1.00-2.50	Fr	Mec	24⅝x30	30¾x36	36	90	40	50	10½	12'0"
	91-A	Tan	2900	4500	53[1]	85[1]	Wis AENL	1-	23.0	8-	1	1	1.00-2.50	Fr	Mec	24⅝x30	30¾x36	36	90	40	50	10½	12'0"
	92-A	Tan	3800	5300	78[1]	107[1]	BS 23A	1-	23.0	8-	1	1	1.00-2.50	Fr	Mec	24⅝x30	30¾x36	36	90	40	50	10½	12'0"
	92-A	Tan	3800	5300	78[1]	107[1]	Wis AENL	1-	23.0	8-	1	1	1.00-2.50	Fr	Mec	24⅝x30	30¾x36	36	90	40	50	10½	12'0"
	3BT	Tan	4800	6750	90[1]	130[1]	Wis TH	2-	54.0	14-	1	1	.50-3.00	Fr	Mec	28x32	36x36	36	111	44	58	9	
	3BA	Tan	6325	8100	130[1]	165[1]	Wis VE4	4-	92.0	20-	1	1	.50-3.00	Fr	Mec	28½x32	36¾x36	36	111½	44	58¾	9	15'0"
Ferguson	2-3 Ton	PT	4780	6000	105	133	Wis TF	2-3¼x3¼	53.9	12-2000	2	2	2.05-4.40	Fr	Mec	24x30	36x32	32	105	64½	61	9	9'0"
	2-3 Ton	PT	4785	6000	105	133	Wis TF	2-3¼x3¼	53.9	12-2000	1	1	2.00-	Fr	Mec	24x30	36x32	32	105	64½	61	9	8'10"
	3-5 Ton	PT	7130	10350	102	152	Wis VH4	4-3¼x3¼	107.7	25-2000	2	2	1.90-4.20	Fr	Hyd	33x40	48x42	42	132	80	59½	12	16'10"
	3-5 Ton	PT	7130	10350	102	152	Cont Y112	4-3 5/16x3½	111.7	29-2000	2	2	1.90-4.20	Pr	Hyd	33x40	48x42	42	132	80	59½	12	16'10"
	4-6 Ton	PT	9000	12220	129	181	Wis VH4	4-3¼x3¼	107.7	25-2000	2	2	1.90-4.20	Fr	Hyd	33x40	48x42	42	132	80	59½	12	16'10"
	4-6 Ton	PT	9000	12200	129	181	Cont Y112	4-3 5/16x3½	111.7	29-2000	2	2	1.90-4.20	Fr	Hyd	33x40	48x42	42	132	80	59½	12	16'10"
	5-8 Ton	Tan	11700	17600	150[1]	220[1]	Cont F162	4-4⅜x3 7/16	162.0		2	2	1.00-4.50	TC	Hyd	40x50	53x50	50	174	60	68	13	18'0"
	5-8 Ton	Tan	11700	17600	150[1]	220[1]	Cont GD157	4-4⅜x3⅜	157.0	45-2000	2	2	1.00-4.50	TC	Hyd	40x50	53x50	50	174	60	68	13	18'0"
	8-12 Ton	Tan	17530	24420	210[1]	287[1]	Cont F226	6-3 5/16x4⅜	162.0	73-2400	2	2	0-5.50	TC	Hyd	48x54	60x54	54	198½	69⅜	95	15	19'0"
	8-12 Ton	Tan	17530	24420	210[1]	287[1]	Cont H260	4-3⅞x5½	157.0	61-2200	2	2	0-5.50	TC	Hyd	48x54	60x54	54	198½	69⅜	95	15	19'0"
	10 Ton	RT	7170	21470	100	298	Ol Super 66	4-3½x3¾	144.0	37-2000	6	2	2.50-12.00	Fr	Hyd	4-7.50/15	5-7.50/15	68	150	68	90	10½	15'0"
	10 Ton	RT	7170	21470	100	298	Ol Super 66	4-3½x3¾	144.0	37-2000	6	6	2.50-12.00	TC	Hyd	4-7.50/15	5-7.50/15	68	150	68	90	10½	15'0"
	10 Ton	RT	7170	21470	100	298	Ol Super 770	6-3½x3¾	216.0	52-2000	6	6	2.50-12.00	TC	Hyd	4-7.50/15	5-7.50/15	68	150	68	90	10½	15'0"
	12 Ton	RT	8270	24800	95	282	Ol Super 770	6-3½x3¾	216.0	52-2000	6	6	2.50-12.00	TC	Hyd	5-7.50/15	6-7.50/15	83	154	68	91	10	18'0"
	12 Ton	RT	8270	24800	95	282	MM 445	4-3⅝x5	206.0	57-1900	5	5	2.50-12.00	TC	Hyd	5-7.50/15	6-7.50/15	83	154	68	91	10	18'0"
	25 Ton	RT	16050	50000	146	454	MM UTIL	6-4¼x5	283.0	62-1400	6	6	2.00-14.50	Fr	Hyd	5-9.00/20	6-9.00/20	96	172	96	87	11	23'0"
	25 Ton	RT	16050	50000	146	454	MM D336	4-4⅝x5	336.0	66-1600	6	6	2.00-14.50	Fr	Hyd	5-9.00/20	6-9.00/20	96	172	96	87	11	23'0"

Galion	Chief 10/13 Ton 20"	TW	21250	26530	373	462	Cont	FA244	6-3 7/16x4 3/8	244.0	79-	2	2	.50-5.50	TC	Hyd	44x44	69x20	76	208	76	81	18	17'0"
	Chief 10 Ton 20"	TW	20600		360		Cont	FA244	6-3 7/16x4 3/8	244.0	79-	2	2	.50-5.50	TC	Hyd	44x44	69x20	76	208	76	81	18	17'0"
	Chief 10/14 Ton 24"	TW	21740	28120	321	418	Cont	FA244	6-3 7/16x4 3/8	244.0	79-	2	2	.50-5.50	TC	Hyd	44x44	69x24	84	208	84	81	18	17'0"
	Chief 10 Ton 24"	TW	21610		321		Cont	FA244	6-3 7/16x4 3/8	244.0	79-	2	2	.50-5.50	TC	Hyd	44x44	69x24	84	208	84	81	18	17'0"
	Chief 12/15 Ton 20"	TW	25010	30110	467	551	Cont	FA244	6-3 7/16x4 3/8	244.0	79-	2	2	.50-5.50	TC	Hyd	44x44	69x20	76	208	76	81	18	17'0"
	Chief 12 Ton 20"	TW	24160		409		Cont	FA244	6-3 7/16x4 3/8	244.0	79-	2	2	.50-5.50	TC	Hyd	44x44	69x20	76	208	76	81	18	17'0"
	Chief 12/16 Ton 24"	TW	26110	32000	412	496	Cont	FA244	6-3 7/16x4 3/8	244.0	79-	2	2	.50-5.50	TC	Hyd	44x44	69x24	84	208	84	81	18	17'0"
	Chief 12 Ton 24"	TW	25350		373		Cont	FA244	6-3 7/16x4 3/8	244.0	79-	2	2	.50-5.50	TC	Hyd	44x44	69x24	84	208	84	81	18	17'0"
	Warrior 7/9 Ton 18"	TW	14425	18675	288	359	Cont	F162	4-3 7/16x4 3/8	162.0	49-	2	2	.50-5.50	TC	Hyd	38x41	60x18	70	190	70	71	15 1/2	14'9"
	Warrior 7 Ton 18"	TW	14300		274		Cont	F162	4-3 7/16x4 3/8	162.0	49-	2	2	.50-5.50	TC	Hyd	38x41	60x18	70	190	70	71	15 1/2	14'9"
	Warrior 7/9 Ton 20"	TW	14675	19300	265	339	Cont	F162	4-3 7/16x4 3/8	162.0	49-	2	2	.50-5.50	TC	Hyd	38x41	60x20	74	190	74	71	15 1/2	14'9"
	Warrior 7 Ton 20"	TW	14675		256		Cont	F162	4-3 7/16x4 3/8	162.0	49-	2	2	.50-5.50	TC	Hyd	38x41	60x20	74	190	74	71	15 1/2	14'9"
	Warrior 8/10 Ton 18"	TW	16725	20750	320	388	Cont	F162	4-3 7/16x4 3/8	162.0	49-	2	2	.50-5.50	TC	Hyd	38x41	60x18	70	190	70	71	15 1/2	14'9"
	Warrior 8 Ton 18"	TW	16150		299		Cont	F162	4-3 7/16x4 3/8	162.0	49-	2	2	.50-5.50	TC	Hyd	38x41	60x18	70	190	70	71	15 1/2	14'9"
	Warrior 8/10 Ton 20"	TW	17125	21425	298	366	Cont	F162	4-3 7/16x4 3/8	162.0	49-	2	2	.50-5.50	TC	Hyd	38x41	60x20	74	190	74	71	15 1/2	14'9"
	Warrior 8 Ton 20"	TW	16625		281		Cont	F162	4-3 7/16x4 3/8	162.0	49-	2	2	.50-5.50	TC	Hyd	38x41	60x20	74	190	74	71	15 1/2	14'9"
	3/5 Ton 2 Axle	Tan	7130	10400	102	155	Cont	Y112	4-3 7/16x3 1/2	112.0	32-	2	2	1.50-3.40	Fr	Hyd	30x40	48x42	42	150 1/2	50 1/4	80	15	14'0"
	4/6 Ton 2 Axle	Tan	8870	12060	126	179	Cont	Y112	4-3 7/16x3 1/2	112.0	32-	2	2	1.50-3.40	Fr	Hyd	30x40	48x42	42	159 1/2	58 1/2	80	9	14'0"
	5/8 Ton 2 Axle	Tan	12050	17650	137	211	Cont	F162	4-3 7/16x4 3/8	162.0	49-	2	2	.50-5.50	TC	Hyd	40x50	53x50	50	179 1/4	62 1/2	84 1/2	15	18'0"
	8/10 1/2 Ton 2 Axle	Tan	16200	21600	196	268	Cont	F162	4-3 7/16x4 3/8	162.0	49-	2	2	.50-5.50	TC	Hyd	40x50	53x50	50	179 1/4	62 1/2	84 1/2	15	18'0"
	8/12 Ton 2 Axle	Tan	16390	24210	182	272	Cont	F226	6-3 5/16x4 3/8	226.0	73-	2	2	.50-5.50	TC	Hyd	48x54	60x54	54	204 1/4	67	94 3/4	16 1/2	19'0"
	10/14 Ton 2 Axle	Tan	27910	27910	260	341	Cont	F226	6-3 5/16x4 3/8	226.0	73-	2	2	.50-5.50	TC	Hyd	48x54	60x54	54	204 1/4	67	94 3/4	16 1/2	19'0"
	14/20 Ton 3 Axle	Tan	28840	40065	315	408	Cont	M330	6-4x4 3/8	330.0	92-	2	2	.50-5.50	TC	Hyd	48x54	60x54	54	270	68 1/2	92	14	29'8"
	Trench	TR	6235	8785	310	370	Wis	VG4D	4-3 1/2x4	154.0	25-	2	2	1.50-3.40	Fr	Hyd		60x20	20	165	81	72	27	17'0"
Huber-Warco	R-7610	Tan	6790	10510	97	160	Her	IXB	4-3 1/4x4	133.0	41-	1	1	.50-5.60	TC	Hyd	34x40	48x42	42	131	54 3/4	73	12	11'6"
	R-6710	Tan	12260	17300	148	214	Her	GO173	4-3 1/2x4 1/2	173.0	59-	2	2	.50-5.75	TC	Hyd	40x50	53x50	50	177	60	84 3/4	14	17'6"
	R-8710	Tan	16260	20380	195	244	Her	GO173	4-3 1/2x4 1/2	173.0	59-	2	2	.50-5.75	TC	Hyd	40x50	53x50	50	177	60	84 3/4	14	17'6"
	R-6810	Tan	16164	24099	185	278	Her	GO226	4-4x4 1/2	226.0	77-	2	2	.50-5.50	TC	Hyd	48x54	60x54	54	197	65 1/2	96	16	19'0"
	R-8810	Tan	20004	27406	240	326	Her	GO226	4-4x4 1/2	226.0	77-	2	2	.50-5.50	TC	Hyd	48x54	60x54	54	197	65 1/2	96	16	19'0"
	R-6310	TW	20200		343		Her	GO339	6-4x4 1/2	339.0	100-	2	2	.40-5.75	TC	Hyd	44x44	69x20	76	205 1/2	76	80 1/2	18 1/2	20'3"
	R-6410	TW	24200		411		Her	GO339	6-4x4 1/2	339.0	100-	2	2	.40-5.75	TC	Hyd	44x44	69x20	76	205 1/2	76	80 1/2	18 1/2	20'3"
	R-6510	TW	28200		479		Her	GO339	6-4x4 1/2	339.0	100-	2	2	.40-5.75	TC	Hyd	44x44	69x20	76	205 1/2	76	80 1/2	18 1/2	20'3"
	R-8310	TW	21120	25920	368	443	Her	GO339	6-4x4 1/2	339.0	100-	2	2	.40-5.75	TC	Hyd	44x44	69x20	76	205 1/2	76	80 1/2	18 1/2	20'3"
	R-7910	TW	25150	28950	469	519	Her	GO339	6-4x4 1/2	339.0	100-	2	2	.40-5.75	TC	Hyd	44x44	69x20	76	205 1/2	76	80 1/2	18 1/2	20'3"
Ingram	5-8	Tan	10200	16150	122	201	Her	GO260	6-3 1/2x4 1/2	260.0	90-	4	4	1.00-6.00	TC	Hyd	40x50	52x50	50	187	57	80	10	20'3"
	8-10	Tan	16100	16100	210	260	Her	GO260	6-3 1/2x4 1/2	260.0	90-	4	4	1.00-6.00	TC	Hyd	40x50	52x50	50	187	57	80	10	20'3"
	8-12	Tan	16300	24035	181	267	Her	GO298	6-3 3/4x4 1/2	298.0	105-	4	4	1.00-6.00	TC	Hyd	45x54	60x54	54	205	65	88	16	19'10"
	5	TW	7600	10000	141	187	Int	U123	4-3 1/8x4	123.0	31-	4	1	.25-8.00	FC	Hyd	32x34	46x18	65	145	65	67	12	15'0"
	6	TW	8900	11900	155	208	Int	U175	4-3 5/8x4 1/4	175.0	52-	5	5	.25-8.00	TC	Hyd	36x36	48x18	69	169	69	60	13	16'0"
	8	TW	12110	15585	223	290	Her	GO260	6-3 1/2x4 1/2	260.0	71-	5	5	.25-8.00	TC	Hyd	38x40	55x18	71 1/2	177	71 1/2	66	16	14'9"
	10	TW	16107	16107	260	337	Her	GO260	6-3 1/2x4 1/2	260.0	71-	5	5	.25-8.00	TC	Hyd	42x44	60x20	79	194	79	79	16	17'0"
	12	TW	20328	24364	352	432	Her	GO298	6-3 3/4x4 1/2	298.0	81-	5	5	.25-8.00	TC	Hyd	44x44	69x20	88 1/2	219	88 1/2	79	21	18'0"
Seaman-Gunnison	619	RT	12350	38000	100	425[6]	Int	350	4-3 5/8x4 1/4	175.0	49-2000	10	2	1.80-17.00	TC	Hyd	8-7.50/15	2-15.00/26	86	264	86	78	10	18'0"
	619-D	RT	13000	39000	100	425[6]	Int	350	4-3 3/4x4 3/8	193.0	52-	10	2	1.80-17.00		Hyd	8-7.50/15	2-15.00/26	86		86	78	10	18'0"
	720-D	RT	14500	40000	104[6]	425[6]	Int	450	4-4 1/8x5 1/4	281.0	65-	10	2	1.80-17.00		Hyd	8-7.50/15	2-15.00/26	86		86	78	10	18'0"
	6-19	RS	12500	38000	100	425	Optional								Opt	Hyd	8-7.50/15	2-15.00/26	86	276	86	80	10	18'0"
	6-19TR	RS	12900	38000	100	425	Optional								Opt	Hyd	8-7.50/15	2-15.00/26	86	278	86	80	10	18'0"
	9-27TR	RS	18000	54000	100	425	Optional								Opt	Hyd	8-7.50/15	2-15.00/26	86	278	86	84	10	18'0"
	9-27VTR	RS	19500	55000	100	425	Optional								Opt	Hyd	8-7.50/15	2-15.00/26	86	278	86	84	10	18'0"
	10-30RD	RS	19400	60000	100	425	Optional								Opt	Hyd	8-7.50/15	2-15.00/26	89	297	95 1/2	89	10	18'0"
Tampo	SP-9S	RT	6400[2]	18300[2]	85	254[2]	Ol	Sup. 66 Ind. HC	4-3 1/2x3 3/4	144.0	41-2200	6	6	2.50-12.00	TC	Hyd	4-7.50/15	5-7.50/15	72	154	72	88	10	20'0"
	SP-9S	RT	6400[2]	18300[2]	85	254[2]	Ol	Sup. 66 Ind. D			37-2000	6	6	2.50-12.00	TC	Hyd	4-7.50/15	5-7.50/15	72	154	72	88	10	20'0"
	SP-11S	RT	8200	22600[2]	93	257[2]	Ol	880HC	6-3 3/4x4	265.0	65-2200	6	6	3.00-22.00	TC	Hyd	5-7.50/15	6-7.50/15	88	155	88	92	10	20'0"
	SP-11S	RT	8200	22600[2]	93	257[2]	Ol	880HD			60-2000	6	6	3.00-22.00	TC	Hyd	5-7.50/15	6-7.50/15	88	155	88	92	10	20'0"

ABBREVIATIONS

1—Drive roll.
2—With wet sand ballast.
3—Drive roll with wet sand ballast.
4—Or equal.
5—With 20 inch rolls.
6—With steel tires.
BS—Briggs & Stratton Corp.
Cat—Caterpillar Tractor Co.
Cont—Continental Motors Corp.
FC—Fluid coupling.
Fr—Friction.
GM—General Motors Corp.
Her—Hercules Motors Corp.
Hyd—Hydraulic.
Int—International Harvester Co.
Mec—Mechanical.
MM—Minneapolis Moline Co.
Ol—Oliver Corp.
Opt—Optional.
PT—Portable tandem.
RS—Rubber and steel roll.
RT—Rubber tired.
Tan—Tandem.
TAT—Three axle tandem.
TC—Torque converter.
TR—Trench roller.
TW—Three wheel.
Wis—Wisconsin Motor Corp.

For Directory of the Roller Manufacturers listed above, see Table of Contents

CRAWLER TRACTORS

Tractor Make and Model	HP Rating: Belt	HP Rating: Drawbar	No. of Forward Speeds	No. of Reverse Speeds	Maximum Drawbar Pull at Normal Governed Engine R.P.M.: First Gear (Lb.)	Second Gear (Lb.)	Third Gear (Lb.)	Fourth Gear (Lb.)	Fifth Gear (Lb.)	Sixth Gear (Lb.)
Allis-Chalmers HD-6	66.50	52.00	5	1	12640	7930	5550	4450	2975	
HD-11	99.00	77.00	6	3	20470	13410	9070	6800	5540	3900
HD-16A-D	148.00	125.00	6	3	33100	21735	15105	11270	9465	6930
HD-16AC-DC	150.00		3	2	60000	47000	26000			
HD-21AC	225.00		2	1	70000	35900				
Case 310		30.20	3	1	5690	3580	2190			
G610, G600		37.00	4	4	15860	9000	7750	4450		
D610, D600		37.00	4	4	15860	9000	7750	4450		
810, 800		48.00	4	4	20700	11750	10000	5660		
1010, 1000		63.50	4	4	25400	14400	12290	6770		
Caterpillar D4	57.00	50.00	5	1	9550	6930	5350	4110	2600	
D6	85.00	75.00	5	4	17000	10900	7550	5150	3600	
D7	128.00	102.00	5	4	25900	17720	11960	7550	5280	
D8		155.00	5	3	39150	30900	21000	14120	9490	
D9		260.00	6	6	54200	44600	30900	22400	16800	10800
John Deere 430-C	29.72	24.12	4	1	4862	3964	2924	1424		
440-IC	29.72	24.12	4	1						
Eimco 105	143.00	77.86	2	2						
Euclid TC-12			3	3						
International T-6	50.64	41.52	5	1	8714	6618	4348	3493	2337	
TD-6	51.49	42.36	5	1	8769	6635	4467	3580	2403	
TD-9	64.46	55.77	5	1	11720	8404	5721	4278	2864	
TD-15		85.00	6	6	20500	16200	11800	8800	6600	4400
TD-20		111.00	6	6	27500	21000	17000	12000	8100	4600
TD-24		175.07	8	8	41130	32237	26600	20287	14560	(10)
TD-24TC			4	4						
Oliver OC-4-3G	26.47	24.06	4	1	4986	3520	2279	1261		
OC-4-3D	27.31	24.75	4	1	5124	3951	2614	1489		
OC-6G	44.00	37.00	6	2	6625	5620	4010	2925	2250	990
OC-6D	44.00	37.00	6	2	6780	5620	4010	2925	2250	990
AD	38.00	30.50	3	1	6500	4520	2800			
OC-12G	60.27	53.14	4	2	10399	7831	5322	3161		
OC-12D	58.98	53.05	4	2	11333	8310	5708	3391		
OC-15	104.64	94.17	4	2	17218	13135	8754	5417		
OC-18		133.02	4	2	31028	18513	11788	6880		

Tractor Make and Model	Travel Speeds at Normal Governed Engine R.P.M.: First Gear (M.P.H.)	Second Gear (M.P.H.)	Third Gear (M.P.H.)	Fourth Gear (M.P.H.)	Fifth Gear (M.P.H.)	Sixth Gear (M.P.H.)	Low Reverse (M.P.H.)	High Reverse (M.P.H.)	Engine: Make and Model	No. of Cylinders—Bore and Stroke (In.)	Displacement (Cu. In.)	R.P.M. at Governed Speed	Valve Arrangement	No. of Main Bearings	Diam. Main Bearings (In.)
Allis-Chalmers HD-6	1.50	2.40	3.30	4.00	5.50		2.00		Own	4-4 7/16x5 9/16	344	1800	1		
HD-11	1.40	2.10	2.90	3.80	4.40	5.70	1.60	(1)	Own	6-4 7/16x5 9/16	516	1800	1		
HD-16A-D	1.40	2.10	3.00	3.90	4.50	5.80	1.50	4.50	Own	6-5¼x6½	844	1600	1		
HD-16AC-DC	2.50	4.30	7.20				3.20	5.50	Own	6-5¼x6½	844	1800	1		
HD-21AC	3.10	8.00					6.00		Own	6-5¼x6½	844	1825	1		
Case 310	1.74	2.75	4.52				2.01		Own G148	4-3⅜x4⅛	148	1850	1	3	2¼
G610, G600	1.66	3.22	3.40	6.56			1.82	(3)	Cont F209	6-3 7/16x4⅜	209	2250	L	3	2⅝
D610, D600	1.66	3.22	3.40	6.50			1.82	(3)	Cont ED208		208	2250	1	3	2⅝
810, 800	1.60	2.90	3.30	6.00			1.90	(4)	Cont HD277		277	2250	1	3	2⅞
1010, 1000	1.60	2.90	3.30	6.00			1.90	(4)	Cont JD382	4-4½x6	382	2000	1	3	3¼
Caterpillar D4	1.90	2.70	3.40	4.20	6.10		2.20		Own D4	4-4½x5½	350	1600	1	5	3½
D6	1.70	2.60	3.60	5.00	6.60		2.00	6.20	Own D6	6-4½x5½	525	1600	1	7	3½
D7	1.50	2.20	3.20	4.60	5.90		1.80	5.40	Own D7	4-5¾x8	831	1200	1	5	3¾
D8	1.50	1.90	2.80	3.80	5.20		2.00	3.80	Own D8	6-5¾x8	1246	1200	1	7	3¾
D9	1.70	2.20	3.00	3.90	5.00	7.00	1.70	7.00	Own D9	6-6¼x8	1473	1240	1	7	4⅛
John Deere 430-C	1.14	2.23	2.98	7.34			1.65		Own 430	2-4¼x4	113	1850	1	2	2 11/16
440-IC	1.14	2.21	2.95	7.34			1.64		Own 440	2-4¼x4	113	1850	1	2	2 11/16
Eimco 105	2.00	6.00							GM 4080	4-4¼x5	284	2000	1	5	3½
Euclid TC-12	2.00	4.00	7.80				2.00	(6)	GM 6-71[7]	6-4¼x5	426[8]	2100	1	7	3½
International T-6	1.60	2.30	3.30	4.00	5.70		1.80		Own C281	4-4⅛x5¼	281	1550	1	3	2¾
TD-6	1.60	2.30	3.30	4.00	5.70		1.80		Own D281	4-4⅛x5¼	281	1550	1	5	3¼
TD-9	1.70	2.50	3.40	4.30	5.90		1.90		Own D350	4-4½x5½	350	1550	1	5	4⅛
TD-15	1.50	1.90	2.50	3.30	4.30	5.80	1.80	(14)	Own 554	6-4⅝x5½	554	1650	1	7	3⅞
TD-20	1.50	2.00	2.40	3.30	4.50	7.00	1.80	(15)	Own 691	6-4¾x6½	691	1550	1	7	3½
TD-24	1.50	2.00	2.40	3.00	4.10	(11)	1.50	7.50	Own D1091	6-5¾x7	1091	1400	1	7	4⅛
TD-24TC	2.70	3.50	6.10	7.60			2.80	(12)	Own D1091	6-5¾x7	1091	1500	1	7	4⅛
Oliver OC-4-3G	1.56	2.37	3.36	5.27			1.81		Her GO130	3-3½x4½	130	1700	1	4	2½
OC-4-3D	1.56	2.37	3.36	5.27			1.81		Her DD130	3-3½x4½	130	1700	1	4	2½
OC-6G	1.88	2.44	3.23	4.19	5.15	8.85	1.92	3.31	Own OC6G	6-3⅝x3¾	216	1600	1	4	2¼
OC-6D	1.88	2.44	3.23	4.19	5.15	8.85	1.92	3.31	Own OC6D	6-3⅝x3¾	216	1600	1	4	2¼
AD	1.78	2.62	3.74				1.36		Her DOOC	4-4x4½	226	1530	1	5	3
OC-12G	1.60	2.34	3.34	5.27			1.72	3.60	Her JXLD	6-4x4¼	339	1750	L	7	2½
OC-12D	1.60	2.34	3.34	5.27			1.72	3.60	Her DJXC	6-3¾x4½	298	1750	1	7	3
OC-15	1.67	2.64	3.76	5.60			1.99	4.48	Her DRXC	6-4⅝x5¼	529	1500	1	7	3½
OC-18	1.50	2.61	3.76	5.45			1.83	3.53	Her DFXE	6-5⅝x6	895	1500	1	7	4½

Tractor Make and Model	Fuel Used	Ignition—Make	Carburetor or Injector Pump—Make	Air Cleaner—Make	Governor—Make	Clutch—Make and Type	Steering Type	Capacities: Cooling System (Gal.)	Fuel Tank (Gal.)	Crankcase (Qts.)	Transmission (Qts.)	Final Drive Case (Qts.) (Each Case)	Starting Method
Allis-Chalmers HD-6	O	N	Bos	Uni	Bos	A-R SP	Clu	9	40	12	20	12	Ele
HD-11	O	N	Bos	Uni	Bos	A-R SP	Clu	11	60	17	27	13	Ele
HD-16A-D	O	N	Bos	Uni	Bos	Roc SP	Clu	16¼	100	24	34	22	Ele
HD-16AC-DC	O	N	Bos	Uni	Bos	TD SP[2]	Clu	18½	100	24	32	22	Ele
HD-21AC	O	N	Bos	Don	Bos	TD SP[2]	Clu	20	135	24	39	30	Ele
Case 310	G	N	MS	Don	Own	Roc SP	Dif	3	10	4	8	5[5]	Ele
G610, G600	G	AL	MS	Don	Nov	TC	Clu	4	25	5	28	4	Ele
D610, D600	O	N	RM	Don	RM	TC	Clu	4¾	25	10	28	4	Ele
810, 800	O	N	RM	Don	RM	TC	Clu	7½	40	10	46	8	Ele
1010, 1000	O	N	RM	Don	RM	TC	Clu	8½	45	10	46	8	Ele
Caterpillar D4	D	N	Own	Don	Own	Own SP	Clu	11	30	15	16	7	GE
D6	D	N	Own	Don	Own	Own DO	Clu	14½	48	22	42	9½	GE
D7	D	N	Own	Don	Own	Own DO	Clu	17	85	22	43	23	GE
D8	D	N	Own	Don	Own	Own TO	Clu	25	118	35	35	20	GE
D9	D	N	Own	Don	Own	Own FO	Clu	35	157	36	52	54	GE
John Deere 430-C	G	DR	MS	Don	Own	Aub SP	Clu	2½	10½	5	8	2½[5]	Ele
440-IC	G	DR	MS	Don	Own	Aub SP	Clu	2¾	10½	5	8	2½[5]	Ele
Eimco 105	O	N	GM	Vor	GM	Own MO	Clu	7½	60	13	128	136[5]	Ele
Euclid TC-12	O	N	GM	Don[8]	GM	All TC	(9)	19[8]	84½[8]	23[8]		36[8]	Ele
International T-6	G	Own	Own	Uni	Own	Roc SP	Clu	10	33	9	16	2[5]	Ele
TD-6	O	Own	Own	Uni	Own	Roc SP	Clu	10	33	9	16	2[5]	Ele
TD-9	O	Own	Own	Uni	Own	Roc SP	Clu	13	33	11	22	3[5]	Ele
TD-15	D	Own	Own	Don	Own	Roc SP	Clu	20	61	20	28	15[5]	Ele
TD-20	D	Own	Own	Don	Own	Roc SP	Clu	24	75	26	42	20[5]	Ele
TD-24	O	Own	Own	Uni	Own	Roc DP	PL	43	135	30	192	21	Ele
TD-24TC	O	Own	Own	Uni	Own	TD TC	PL	47	135	30	192	21	Ele
Oliver OC-4-3G	G	DR	MS	Don	Her	Dan DP	C-D	3	11	5	8	1½[5]	Ele
OC-4-3D	O	N	Har	Don	Har	Dan DP	C-D	3	11	5	8	1½[5]	Ele
OC-6G	G	DR	MS	Don	Own	Lg SP	Dif	4¼	16½	5	22	9[5]	Ele
OC-6D	O	N	Bos	Don	Bos	Lg SP	Dif	4¼	16½	5	22	9[5]	Ele
AD	O	N	RM	Vor	RM	Lg DP	Dif	5½	18	13	40	(13)	Ele
OC-12G	G	DR	MS	Don	Pie	Lg DP	DCP	6	35	7	32	8	Ele
OC-12D	O	N	RM	Don	Har	Lg DP	DCP	5	35	12	32	8	Ele
OC-15	O	N	RM	Don	Har	Roc SP	Dif	10½	46	16	36	16[5]	Ele
OC-18	O	N	Bos	Vor	Bos	Roc DP	D-P	15½	66	36	104	20	Ele

ABBREVIATIONS

1—2nd reverse speed, 3.50; 3rd, 4.40.
2—With torque converter.
3—2nd reverse speed, 3.51; 3rd, 3.74; 4th, 7.20.
4—2nd reverse speed, 3.50; 3rd, 4.00; 4th, 7.20.
5—Total for all cases.
6—2nd reverse speed, 4.00; 3rd, 7.80.
7—Two engines used.
8—Each egnine.
9—Independent power to each track.
10—6th, 10980; 7th, 8777; 8th, 6393.
11—6th, 5.20; 7th, 6.00; 8th, 7.70.
12—2nd reverse speed; 3rd, 5.20; 4th, 6.60.
13—Included in transmission.
14—2nd reverse speed, 2.30; 3rd, 3.20; 4th, 4.10; 5th, 5.30; 6th, 7.10.
15—2nd reverse speed, 2.40; 3rd, 2.90; 4th, 3.90; 5th, 5.40; 6th, 8.40.

AL—Electric Auto-Lite Co.
All—Allison Div.
A-R—Auburn or Rockford
Aub—Auburn Clutch Co.
Bos—American Bosch Co.
C-D—Clutches or differential.
Clu—Clutches.
Cont—Continental Motors Co.
D—Distillate.
Dan—Dana Corp.
DCP—Differential, clutches or "Power Turn."
Dif—Differential.
DO—Double plate, operating in oil.
Don—Donaldson Co.
DP—Double plate, dry.
D-P—Differential or "Power Turn" steering.
DR—Delco-Remy Div.
Ele—Electric starting motor.
FO—Four plate, operating in oil.
G—Gasoline.
GE—Independent gasoline engine.
GM—General Motors Corp.
Har—Hartford.
Her—Hercules Motor Corp.
I—Valves in head.
L—"L" head (valves at side).
Lg—Long Mfg. Div.
MO—Multiple disc, operating in oil.
MS—Marvel-Schebler Carburetor Div.
N—No or none.
Nov—Novi Equipment Co.
O—Diesel oil.
Pie—Pierce Governor Corp.
PL—Planetary.
RM—Roosa-Master.
Roc—Rockford Clutch Div.
SP—Single plate, dry.
TC—Torque converter.
TD—Twin Disc Clutch Co.
TO—Triple plate, operating in oil.
Uni—United Specialties.
Vor—Vortox Mfg. Co.

For Directory of the Tractor Manufacturers listed above, see Table of Contents

SCRAPERS

MAKE AND MODEL		TRACTOR — ENGINE — Make and Model		ENGINE — No. of Cylinders—Bore and Stroke (In.)	ENGINE — Displacement (Cu. In.)	ENGINE — Max. Brake Hp. at RPM	ENGINE — Fuel	Clutch Type	TRANSMISSION — Forward Speeds	TRANSMISSION — Reverse Speeds	Travel Speeds—Mph Forward-Range	Travel Speeds—Mph Reverse Range	SCRAPER — CAPACITY (Cu. Yds.) Struck	CAPACITY Heaped	CAPACITY Payload—Tons	Method of Operation	Ejection	Width of Cut (In.)	Depth of Cut (In.)	Depth of Spread (In.)	COMPLETE UNIT — Overall Dimensions Length	Overall Dimensions Width	Overall Dimensions Height	TIRES—Size and Ply Front	TIRES—Size and Ply Rear	WEIGHTS Empty (Lb.)	WEIGHTS With Payload (Lb.)
Allis-Chalmers	TS-160	Own	TDS516	6-4⅜x5¾	516.0	155-2200	D	DPD	5	1	3.1-25.4	3.1	7.0	9.5	12.0	Hyd	PFF	97½	24¾	16⅝	31'5¼"	10'0"	9'9"	18x25-16	18x25-16	28500	52500
	TS-260	16000		6-5¼x6½	844.3	230-2000	D	SPD	5	1	2.7-27.9	3.5	12.5	17.0	20.3	Hyd	PFF	116	13⅞	18	34'10¾"	11'6⅞"	9'11½"	26.5x25-20	26.5x25-20	44800	85400
	TS-360	Own	TDS844	6-5¼x6½	844.0	280-2100	D	SPD	4	1	3.0-20.0	3.1	15.0	20.0	25.0	Cab	PFF	116	14	24	36'6"	11'6"	10'4"	24x29-24	24x29-24	49050	99050
Caterpillar	DW-15	Own		6-5⅛x6½	805.0	200-2000	D	DPD	5	1	2.7-29.1	4.1	13.0	18.0	19.5	Cab	DTP	112	Prac	18½	40'11⅛"	10'9¾"	10'0"	12x20-14	26½x25-20	44090	83090
	DW-20	Own		6-5⅛x6½	805.0	300-1800	D	DPD	5	1	2.8-25.1	3.7	18.0	25.0	27.5	Cab	DTP	124	Prac	20	43'10"	11'9"	11'3½"	14x24-16	29½x29-22	56195	111195
	DW-21	Own		6-5⅛x6½	805.0	300-1800	D	DPD	5	1	2.3-20.5	3.0	18.0	25.0	27.5	Cab	DTP	124	Prac	20	41'7"	11'9"	11'0"	29½x29-22	29½x29-22	58670	113670
Curtiss-Wright	CW-27	GM	4055C	4-4¼x5	283.7	143-	D		5	1	30.0	3.6	7.0	10.0	13.0	Cab	PRO	87	15	21½	29'10"	8'6"	8'8"	18x25-20		32500	58500
	CW-215	Cum	HRS6	6-5⅛x6	743.0	240-	D		5	1	31.2	5.2	15.0	21.0	21.0	Cab	PRO	120	16	20	38'4"	11'10"	10'0"	29.5x25-22		54000	96000
	CW-320	Cum	NRT6	6-5⅛x6	743.0	300-	D		9	2	32.0	7.8	20.0	27.0	31.0	Cab	PRO	120	18	22	42'½"	11'11"	9'11"	29.5x29-28		64500	126500
	CW-220	GM	6-110T	6-5x5⅝	660.0	375-	D		4	2	34.4	6.7	20.0	27.0	31.0	Cab	PRO	120	19	24	43'3"	11'11"	10'11"	33.5x33-26		69000	131000
	CW-226	GM	6-110T	6-5x5⅝	660.0	375-	D		4	2	34.4	6.7	26.0	36.0	39.0	Cab	PRO	120	20	20	47'10½"	11'11"	14'0"	33.5x33-32		85500	163500
Euclid	S-7	GM	4-71	4-4¼x5	284.0	143-2100	D	TC	4	2			7.0	9.0	10.5	Hyd	PRO	84	10½	20	29'10"	8'0"	8'4½"	18x25-16	18x25-16	26500	47500
	S-12	GM	6-71	6-4¼x5	426.0	218-2100	D	SP	5	1	2.9-22.6	3.9	12.0	17.0	20.0	Hyd	PRO	114½	14	27	35'3"	11'1½"	9'8½"	24x25-18	24x25-18	46100	86100
	SS-12	GM	6-71	6-4¼x5	426.0	218-2100	D	SP	5	1	2.7-28.0	3.5	12.0	17.0	20.0	Hyd	PRO	117½	15	29	40'8"	11'1½"	9'4"	12x24-14	21x25-20	46250	86250
	SS-18	GM	6-110	6-5x5⅝	660.0	300-2000	D	TC	3	1			18.0	25.0	27.5	Hyd	PRO	123½	15½	21½	45'6"	11'6½"	8'4"	14x25-16	24x25-24	56900	111900
	SS-18	Cum	NHRS	6-5⅛x6	743.0	320-2100	D	SP	10	2	2.8-28.2	3.6-4.7	18.0	25.0	27.5	Hyd	PRO	123½	14	21½	44'10"	11'6½"	10'3"	14x25-16	24x25-24	55400	110400
	S-18	GM	6-110	6-5x5⅝	660.0	325-2000	D	TC	4	2			21.0	30.0	35.0	Hyd	PRO	123½	13½	24	41'2"	11'6½"	10'11½"	27x33-24	27x33-24	68400	138400
	SS-24	GM	6-110	6-5x5⅝	660.0	325-2000	D	TC	4	2			24.0	32.0	40.0	Hyd	PRO	123½	15	22	47'8"	11'7½"	10'3"	14x25-20	27x33-30	67000	147000
	SS-24	Cum	NRTO6B1	6-5⅛x6	743.0	335-2100	D	TC	4	2			24.0	32.0	40.0	Hyd	PRO	123½	15	22	47'8"	11'7½"	10'3"	14x25-20	27x33-30	67000	147000
	TS-24	GM	6-110[1]	6-5x5⅝	660.0	300-2000	D	TC[2]	3[3]	3[3]			24.0	32.0	40.0	Hyd	PRO	123½	13½	26½	45'5"	11'6½"	11'0"	27x33-30	27x33-30	80000	160000
International	55	Cum	HR6B1	6-5⅛x6	743.0	175-1800	D	SP	5	1	2.8-24.1	2.8	10.3	14.0	21.0	Cab	PRO	100¼	Un	19	34'0"	10'10½"	9'4"	26.5x25-20	26.5x25-20	40865	82865
	75	Cum	NTO6B1	6-5⅛x6	743.0	262-2100	D	SP	5	1	2.7-23.4	2.3	15.0	20.0	27.5	Cab	PRO	113¼	Un	21½	39'4"	11'5¾"	10'2"	29.5x29-22	29.5x29-22	54345	109345
Le Tourneau-Westinghouse	D	GM	4-71	4-4¼x5	283.7	138-2000	D	SP	5	1	3.2-29.5	3.2	7.3	9.0	10.0	Ele	PF	84	Un	24	28'1"	8'0"	9'1½"	18x25-12	18x25-12	22830	42830
	C	GM	6-71	6-4¼x5	425.6	226-2100	D	SP	5	1	3.3-33.5	4.2	12.2	18.0	20.0	Ele	PF	114	Un	16	37'3"	11'4"	10'1"	24x25-18	24x25-18	43860	83860
	C	Cum	HS6B1	6-4⅞x6	672.0	210-1800	D	SP	5	1	2.8-28.7	3.6	12.2	18.0	20.0	Ele	PF	114	Un	16	37'3"	11'4"	10'1"	24x25-18	24x25-18	44920	84920
	B	GM	6-110	6-5x5⅝	660.0	335-2000	D	DP	5	1	2.6-28.4	2.4-3.5	21.0	28.0	32.5	Ele	PF	120	Un	20	44'2"	11'9"	12'2"	27x33-24	27x33-24	68900	133900
	B	Cum	NRTO6B1	6-5⅛x6	743.0	335-2100	D	TC	4	2	4.8-31.7	3.7-5.6	21.0	28.0	32.5	Ele	PF	120	Un	20	44'2"	11'9"	12'2"	27x33-24	27x33-24	69800	134800
Michigan	110	Cum	JT6B1	6-	401.0	162-1950	D		4	2	31.4	8.6	8.0	10.5	13.0	Hyd	PF	84	11	18½	32'6"	8'10"	9'7½"	23.5x25-16	23.5x25-16	28000	54000
	210	Cum	NTO6B1	6-	743.0	262-2100	D		4	2	31.4	8.6	13.5	19.0	22.5	Hyd	PF	114	14	23	37'4"	11'2¼"	11'1½"	26.5x25-26	26.5x25-26	45800	90800
	310	Cum	NFT6B1	6-	743.0	375-2300	D		4	2	31.2	8.3	21.6	29.0	35.0	Hyd	PF	124	16½	28½	43'11¾"	12'0"	13'5"	33.5x33-26	33.5x33-26	72500	142500
Oliver	990	GM		3-4¼x5	213.0	92-1800	D	SPD	6	2				6.7		Hyd	Hyd		5¼	1¼	30'5½"	8'6¼"	6'11"	18x26-10	14x20-12	16980	
	995	GM		3-4¼x5	213.0	99-2000	D	SPD	6	2				6.7		Hyd	Hyd		5¼	1¼	30'5½"	8'6¼"	6'11"	18x26-10	14x20-12	17180	
Seaman-Gunnison	W450	Int[4]		4-	281.0	65-1450	D		10		1.6-17.0		4.5	6.0		Hyd	Hyd	84	6	14	27'0"	7'6"	9'6"	15x26-10	10x20-12	14800	31500
	650	Int		4-	350.0	88-1800	D		5		2.4-21.0		4.5	6.0		Hyd	Hyd	84	6	14	25'5"	7'6"	9'9"	18x26-10	10x20-12	16000	31500
	6-84	Optional						Opt					5.0	6.0	9.0	Hyd	Hyd	84	6	14	27'11"	8'0"	6'9"	18x26-10	11.25x28-10	16300	34300

ABBREVIATIONS

1—Tractor engine only; scraper also has GM 6-71 Diesel engine, 6-4¼x5, 426 cu. in.; 218-2100 hp.
2—One used for each engine.
3—Tractor only; scraper also has transmission with three forward and one reverse speed.
4—Gasoline engine also available.

Cab—Cable.
Cum—Cummins Diesel Engine Co.
D—Diesel oil.
DP—Double plate.
DPD—Double plate, operating dry.
DTP—Dozer type, positive.
Ele—Electric.
GM—General Motors Corp.
Hyd—Hydraulic.
Int—International Harvester Co.
Opt—Optional.
PF—Positive forced.
PFF—Positive forward forced.
Prac—Any practical depth.
PRO—Positive roll out.
SP—Single plate.
SPD—Single plate, operating dry.
TC—Torque converter.
Un—Unlimited.

For Directory of the Scraper Manufacturers listed above, see Table of Contents

GRADERS

MAKE AND MODEL	WEIGHT (Lb.) Front	WEIGHT (Lb.) Rear	WEIGHT (Lb.) Total	OVERALL DIMENSIONS Length	OVERALL DIMENSIONS Width	Height—Without Cab	Height—With Cab	ENGINE Make and Model	No. of Cylinders—Bore and Stroke (In.)	Displacement (Cu. In.)	Max. Brake Hp at R.P.M.	SPEEDS (M.P.H.) No. of Forward	No. of Reverse	Range of Forward	Range of Reverse	MOLDBOARD (BLADE) Pressure—Lb.	Ground Penetration (In.)	Length & Thickness	Width (In.)	Lift for Ground Clearance (In.)	TIRE SIZE Front	TIRE SIZE Rear	Brake Actuation
Allis-Chalmers D	2700	6100	8800	18'4"	6'1½"	6'1¾"	8'9⅞"	Own	4-4x4½	226.0	58-1650	4	....	2.7-25.2	3.3	4900	....	10'-⅝"	16⅝	12	6.50/16	7.50/20	Mec
DD	2760	6590	9350	18'7½"	6'1½"	6'1¾"	8'9⅞"	Own	6-3 7/16x4⅛	230.0	50-1625	4	....	2.6-25.2	3.2	4900	....	10'-⅝"	16⅝	12	6.50/16	7.50/20	Mec
Forty Five	6425	17375	23800	25'9"	7'7¾"	9'½"	10'6⅛"	Own ADS516	6-4 7/16x5 9/16	516.0	120-1600	6	3	2.7-20.6	3.2- 7.0	10950	....	12'-¾"	24	19⅝	9.00/24	13.00/24	Hyd
Austin-Western 88-L	7107	9078	16185	24'0"	7'9"	8'5½"	9'9½"	GM 3-71	3-4¼x5	212.8	106-2100	6	2	2.5-20.8	2.6- 8.9	12490	18	12'-⅝"	22½	15	13.00/24	13.00/24	Hyd
88-L[1]	7134	9266	16400	24'0"	7'9"	8'5½"	9'9½"	GM 3-71	3-4¼x5	212.8	106-2100	6	2	2.5-20.8	2.6- 8.9	12540	18	12'-⅝"	22½	15	13.00/24	13.00/24	Hyd
Super 88	7115	11527	18642	25'3"	8'0"	8'5½"	9'9½"	GM 3-71	3-4¼x5	212.8	106-2100	6	2	2.5-20.8	2.6- 8.9	12500	18	12'-¾"	22½	15	12.00/24	12.00/24	Hyd
Super 88[1]	7142	11715	18857	25'3"	8'0"	8'5½"	9'9½"	GM 3-71	3-4¼x5	212.8	106-2100	6	2	2.5-20.8	2.6- 8.9	12550	18	12'-¾"	22½	15	12.00/24	12.00/24	Hyd
99-L	8687	12263	20950	24'8¾"	7'10¾"	8'8"	10'4"	GM 4-71	4-4¼x5	283.7	118-1900	6	2	2.0-17.8	2.0- 7.0	16250	21	13'-¾"	24	16	14.00/20	14.00/20	Hyd
99-L[1]	8712	12453	21165	24'8¾"	7'10¾"	8'8"	10'4"	GM 4-71	4-4¼x5	283.7	122-2000	6	2	2.0-17.8	2.0- 7.0	16250	21	13'-¾"	24	16	14.00/20	14.00/20	Hyd
99-L	8687	12378	21065	24'8¾"	7'10¾"	8'8"	10'4"	Int UD14A	4-4¾x6½	460.7	100-1800	6	2	2.0-17.8	2.0- 7.0	16250	21	13'-¾"	24	16	14.00/20	14.00/20	Hyd
Super 99	8747	14103	22850	26'3¼"	8'0"	8'8"	10'4"	GM 4-71	4-4¼x5	283.7	118-1900	6	2	2.0-17.8	2.0- 7.0	16400	21	13'-¼"	24	16	13.00/24	13.00/24	Hyd
Super 99[1]	8772	14293	23065	26'3¼"	8'0"	8'8"	10'4"	GM 4-71	4-4¼x5	283.7	122-2000	6	2	2.0-17.8	2.0- 7.0	16400	21	13'-¾"	24	16	13.00/24	13.00/24	Hyd
Super 99	8747	14218	22965	26'3¼"	8'0"	8'8"	10'4"	Int UD14A	4-4¾x6½	460.7	100-1800	6	2	2.0-17.8	2.0- 7.0	16400	21	13-¾"	24	16	13.00/24	13.00/24	Hyd
Caterpillar 12	6715	16440	23155	25'8¾"	7'9¼"	7'5½"	10'4"	Own	6-4½x5½	525.0	115-1800	6	2	2.3-19.3	4.0- 6.3	....	....	12'-¾"	24	16	9.00/25	13.00/24	......
112	6030	14775	20805	24'11"	7'9"	7'4"	10'3"	Own	4-4½x5½	350.0	75-1800	6	2	2.1-16.0	2.8- 4.0	....	....	12'-¾"	24	16	7.50/25	13.00/24	......
Galion 503	2820	6600	9420	19'9"	6'2"	6'2"	8'8½"	Int UD236[2]	6-3 11/16x3 11/16	236.0	50-1800	4	1	2.3-20.4	4.3	....	....	10'-⅝"	16⅝	12	7.50/20	7.50/20	Mec
303	4410	10590	15000	23'4"	7'2"	7'1"	9'8"	Int UD282[2]	6-3 11/16x4 25/64	282.0	60-1800	8	2	1.1-16.8	1.4- 4.6	6300	....	10'-½"	20	15½	10.00/24	10.00/24	Hyd
450	6200	14865	21065	25'5"	7'9½"	7'7½"	10'6"	Int UD350[2]	4-4½x5½	350.0	75-1800	6	2	1.1-20.1	1.3- 8.4	11500	....	12'-¾"	24½	18½	13.00/24	13.00/24	Hyd
104	6740	15810	22550	25'5"	7'9½"	7'7½"	10'6"	Int UD14A[2]	4-4¾x6½	461.0	100-1800	6	2	1.1-20.1	1.3- 8.4	11790	....	12'-¾"	24½	18½	13.00/24	13.00/24	Hyd
118	6910	16600	23510	25'8"	7'10½"	7'8½"	10'7"	Int UD554	6-4⅝x5½	554.0	125-1800	6	2	1.3-22.6	1.5-10.5	11950	....	13'-¾"	24½	19½	13.00/24	13.00/24	Hyd
160	8320	20200	28520	26'8"	7'10½"	7'8½"	10'7"	Cum H6BI	6-4⅞x6	672.0	160-1800	6	2	1.3-22.6	1.5-10.5	16400	....	13'-¾"	29	19½	14.00/24	14.00/24	Hyd
T-500	7315	16320	23635	25'10"	7'10½"	7'8½"	10'7"	Cum JN6BI	6-4⅛x5	401.0	125-2500	4	4	.8-22.0	.8-22.0	15400	....	13'-¾"	24½	19½	13.00/24	13.00/24	Hyd
T-600	8320	20200	28520	26'8"	7'10½"	7'8½"	10'7"	Cum JS6BI	6-4⅛x5	401.0	160-2500	4	4	.8-22.0	.8-22.0	16400	....	13'-¾"	29	19½	14.00/24	14.00/24	Hyd
T-700	12550	26320	38870	28'2"	8'6"	9'3½"	11'2"	Cum NH220BI	6-5⅛x6	743.0	220-2100	3	3	.9-20.0	.9-20.0	22020	....	14'-1"	30	19¼	16.00/24	16.00/24	Hyd
Huber-Warco 4D-75	6560	15190	21750	25'8"	7'11"	9'1"	10'7½"	Int UD350	4-4½x5½	349.9	75-......	8	2	1.1-22.2	1.6- 5.1	12100	32	12'-¾"	22	16	13.00/24	13.00/24	Hyd
4D-85	6660	15440	22100	25'8"	7'11"	9'1"	10'7½"	GM 3-71	3-4¼x5	212.8	100-......	8	2	1.1-22.2	1.6- 5.1	12140	32	12'-¾"	24	16	13.00/24	13.00/24	Hyd
4D-115	6750	15700	22450	25'10"	7'11½"	9'2"	10'8½"	GM 4-71	4-4¼x5	283.7	123-......	8	2	1.2-25.0	1.7- 5.3	12340	31	12'-¾"	26	17	14.00/24	14.00/24	Hyd
6-D	7750	16370	24120	26'4"	7'11"	9'1"	10'7½"	GM 3-71	3-4¼x5	212.8	102-......	4	4	.7-20.2	.7-20.2	13500	32	12'-¾"	24	16	13.00/24	13.00/24	Hyd
6-D2	7820	16980	24800	26'6"	7'11½"	9'2"	10'8½"	Cum JN6BI	6-4⅛x5	401.0	125-......	4	4	.7-20.2	.7-20.2	13840	31	12'-¾"	24	17	14.00/24	14.00/24	Hyd
7-D	8600	18400	27000	26'6"	7'11½"	9'2"	10'8½"	GM 4-71	4-4¼x5	283.7	140-......	4	4	.7-20.6	.7-20.6	15520	31	13'-¾"	26	17	14.00/24	14.00/24	Hyd
7-D[2]	8385	19115	27500	26'6"	7'11½"	9'2"	10'8½"	Cum JBIS600	6-4⅛x5	401.0	150-......	4	4	.7-20.6	.7-20.6	15520	31	13'-¾"	26	17	14.00/24	14.00/24	Hyd
5D-190	9560	20440	30000	28'10¾"	8'5⅛"	9'4"	10'10½"	GM 6-71	6-4¼x5	425.6	195-......	3	1	.9-20.0	1.1- 5.7	15800	30	13'-¾"	28	17	16.00/24	16.00/24	Hyd
M-52	2120	4130	6250	13'6½"	7'2"	6'1"	8'4"	Cont F162	4-3 7/16x4⅜	162.0	45-2100	5	1	1.7-20.7	2.8- 4.2	5650	9½	9'-⅝"	13½	9	7.50/16	12.00/38	Hyd
Le Tourneau-Westinghouse 220	4210	10225	14435	22'9"	7'3"	7'2"	9'11"	GM 4-51	4-4 7/64x4 7/64	216.5	60-1800	5	1	1.8-18.3	2.5- 3.2	7210	....	10'-½"	20	17	10.00/24	10.00/24	Mec
330	6555	14365	20920	25'3"	7'8"	7'7"	10'5"	GM 3-71	3-4¼x5	212.8	80-1800	8	4	1.4-23.3	1.1-12.2	....	....	12'-¾"	25	17¼	7.50/24	12.00/24	Hyd
330	6555	14765	21320	25'3"	7'8"	7'7"	10'5"	Cum J6BI	6-4⅛x5	401.0	80-1800	8	4	1.4-23.3	1.1-12.2	....	....	12'-¾"	25	17¼	7.50/24	12.00/24	Hyd
440	6700	16300	23000	25'4"	7'9"	7'8"	10'6"	GM 4-71	4-4¼x5	283.7	115-1800	8	4	1.4-25.2	1.2-13.2	....	....	12'-¾"	25	18	9.00/24	13.00/24	Hyd
440	6700	16425	23125	25'4"	7'9"	7'8"	10'6"	Cum NHC4BI	4-5⅛x6	495.0	115-1800	8	4	1.4-25.2	1.2-13.2	....	....	12'-¾"	25	18	9.00/24	13.00/24	Hyd
550	6725	17130	23855	25'5"	7'9"	7'8"	10'6"	GM 4-71	4-4¼x5	283.7	123-1800	8	4	1.4-25.2	1.2-13.2	....	....	12'-¾"	25	18	9.00/24	13.00/24	Hyd
550	6725	17600	24325	25'5"	7'9"	7'8"	10'6"	Cum NHC4BI	4-5⅛x6	495.0	123-1800	8	4	1.4-25.2	1.2-13.2	....	....	12'-¾"	25	18	9.00/24	13.00/24	Hyd
Power Flow 550	6720	17380	24100	25'5"	7'9"	7'8"	10'6"	GM 4-71	4-4¼x5	283.7	135-2000	4	4	.2-26.4	.2-23.5	....	....	12'-¾"	25	18	9.00/24	13.00/24	Hyd
Power Flow 550	6725	17850	24575	25'5"	7'9"	7'8"	10'6"	Cum NHC4BI	4-5⅛x6	495.0	135-2000	4	4	.2-26.4	.2-23.5	....	....	12'-¾"	25	18	9.00/24	13.00/24	Hyd
660	7010	20240	27250	26'4"	7'10"	8'0"	10'8"	GM 6-71	6-4¼x5	425.6	160-1800	8	4	1.3-26.0	1.1-13.7	....	....	12'-¾"	28	18¾	14.00/24	14.00/24	Hyd
660	7010	20720	27730	26'4"	7'10"	8'0"	10'8"	Cum H6BI	6-4⅞x6	672.0	160-1800	8	4	1.3-26.0	1.1-13.7	....	....	12'-¾"	28	18¾	14.00/24	14.00/24	Hyd
Power Flow 660	7010	20370	27380	26'4"	7'10"	8'0"	10'8"	GM 6-71	6-4¼x5	425.6	190-2000	4	4	.2-27.4	.2-24.4	....	....	12'-¾"	28	18¾	14.00/24	14.00/24	Hyd
Power Flow 660	7010	20840	27850	26'4"	7'10"	8'0"	10'8"	Cum HRFBI600	6-5⅛x6	743.0	190-2000	4	4	.2-27.4	.2-24.4	....	....	12'-¾"	28	18¾	14.00/24	14.00/24	Hyd
Pettibone PM-12	8400	18450	26850	26'4"	7'11"	9'1½"	10'2½"	GM 4-71	4-4¼x5	283.7	145-2100	6	6	.5-24.1	.4-19.6	14650	....	12'-¾"	24	17½	14.00/24	14.00/24	Hyd
PM-12	8400	18450	26850	26'4"	7'11"	9'1½"	10'2½"	Her PM529	6-5⅝x5¼	529.0	145-2100	6	6	.5-24.1	.4-19.6	14650	....	12'-¾"	24	17½	14.00/24	14.00/24	Hyd
PM-412	10100	14300	24400	25'7"	7'10 3/16"	9'1½"	10'2½"	GM 4-71	4-4¼x5	283.7	145-2100	6	6	.5-24.1	.4-19.6	17800	....	12'-¾"	24	17½	14.00/24	14.00/24	Hyd
PM-412	10100	14300	24400	25'7"	7'10 3/16"	9'1½"	10'2½"	Her PM529	6-4⅝x5¼	529.0	145-2100	6	6	.5-24.1	.4-19.6	17800	....	12'-¾"	24	17½	14.00/24	14.00/24	Hyd
PM-612	10575	18775	29350	26'4"	7'11"	9'1½"	10'2½"	GM 4-71	4-4¼x5	283.7	145-2100	6	6	.5-24.1	.4-19.6	17850	....	12'-¾"	24	17½	14.00/24	14.00/24	Hyd
PM-612	10575	18775	29350	26'4"	7'11"	9'1½"	10'2½"	Her PM529	6-4⅝x5¼	529.0	145-2100	6	6	.5-24.1	.4-19.6	17850	....	12'-¾"	24	17½	14.00/24	14.00/24	Hyd

ABBREVIATIONS

1—With torque converter.
2—Gasoline engine also available.
Cont—Continental Motors Co.
Cum—Cummins Diesel Engine Co.
GM—General Motors Corp.
Her—Hercules Motor Co.
Hyd—Hydraulic.
Int—International Harvester Co.
Mec—Mechanical.

For Directory of the Grader Manufacturers listed above, see Table of Contents

DIRECTORY OF MANUFACTURERS

Following are the company names and addresses of manufacturers whose products are listed in the tables of specifications of complete motor vehicles, tractors, aircraft, construction and off-highway equipment, all types of gasoline and Diesel engines, and aircraft gas turbines.

U. S. PASSENGER CARS

For details of their products see pages 100-117.

American Motors Corp., Detroit 32, Mich.
BUICK Motor Div., General Motors Corp., Flint 2, Mich.
CADILLAC Motor Car Div., General Motors Corp., Detroit 32, Mich.
CHEVROLET Motor Div., General Motors Corp., Detroit 2, Mich.
CHRYSLER Div., Chrysler Corp., Detroit 31, Mich.
DE SOTO Div., Chrysler Corp., Detroit 31, Mich.
DODGE Div., Chrysler Corp., Detroit 31, Mich.
EDSEL, see M-E-L Div.
FORD Div., Ford Motor Co., Dearborn, Mich.
IMPERIAL, see Chrysler Div.
LINCOLN, see M-E-L Div.
M-E-L Div., Ford Motor Co., Dearborn, Mich.
MERCURY, see M-E-L Div.
OLDSMOBILE Div., General Motors Corp., Lansing 21, Mich.
PLYMOUTH Div., Chrysler Corp., Detroit 31, Mich.
PONTIAC Motor Div., General Motors Corp., Pontiac 11, Mich.
RAMBLER, see American Motors Corp.
STUDEBAKER-Packard Corp., South Bend 27, Ind.

FOREIGN PASSENGER CARS

For details of their products see pages 118-121.

GREAT BRITAIN

A. C. Cars Ltd., Thames Ditton, Surrey, England.
ALVIS Ltd., Coventry, England.
ARMSTRONG SIDDELEY Motors, Ltd., Coventry, England.
ASTON MARTIN, Lagonda Ltd., Feltham, Middlesex, England.
AUSTIN Motor Co., Ltd., Longbridge, Birmingham, England.
AUSTIN-HEALEY, see Donald Healey Motor Co., Ltd.
BENTLEY, see Rolls-Royce, Ltd.
BERKELEY, Cars Ltd., Biggleswade, Bedfordshire, England.
CITROEN Cars Ltd., Slough, Bucks, England.
DAIMLER Co., Ltd., Coventry, England.
Donald Healey Motor Co., Ltd., Warwick, England.
FAIRTHORPE, Ltd., Chalfont St., Peter, Bucks, England.
FORD Motor Company, Ltd., Dagenham, England.
FRISKY Cars Ltd., Fallings Park, Wolverhampton, England.
HILLMAN, see Rootes Group.
HUMBER, see Rootes Group.
JAGUAR Cars, Ltd., Coventry, England.
JENSEN Motors Ltd., West Bromwich, England.
LOTUS Cars Div., Lotus Engineering Co., Ltd., London N. 8, England.
METROPOLITAN, see Austin Motor Co., Ltd.
M.G., see Nuffield Exports Ltd.
MORGAN Motor Co., Ltd., Malvern Link, Worcestershire, England.
MORRIS, see Nuffield Exports, Ltd.
Nuffield Exports Ltd., Cowley, Oxford,
S. E. Opperman Ltd., Boreham Wood, Herts., England.
PEERLESS Cars Ltd., Slough, Bucks, England.
RILEY, see Nuffield Exports Ltd.
ROLLS-ROYCE, Ltd., London N.W. 10, England.
Rootes Group, Coventry, England.
ROVER Company Ltd., Solihull, Warwickshire, England.
SINGER, see Rootes Group.
STANDARD Motor Co., Ltd., Coventry, England.
SUNBEAM, see Rootes Group.
TRIUMPH, see Standard Motor Co., Ltd.
UNICAR, see S. E. Opperman Ltd.
VAUXHALL Motors Ltd., Luton, Bedfordshire, England.
WOLSELEY, see Nuffield Exports Ltd.

AUSTRALIA

General Motors-HOLDEN'S Ltd., Melbourne, Australia.

AUSTRIA

STEYR-Daimler-Puch, Steyr, Austria.

CZECHOSLOVAKIA

Motokov, Praha 7, Czechoslovakia.
SKODA, see Motokov.
TATRA, Koprivnice, Czechoslovakia.

FRANCE

BUGATTI, Molsheim, Bas-Rhin, France.
Societe Anonyme Andre CITROEN, Paris 15, France.
FACEL VEGA S.A., Paris 8, France.
S.A. des Anciens Etablissements PANHARD & Levassor, Paris 19, France.
S.A. des Automobiles PEUGEOT, Paris 8, France.
Regie Nationale des Usines RENAULT, Billancourt, Seine, France.
Robert de ROVIN, Paris 17, France.
SIMCA, Paris 16, France.
Automobiles TALBOT - Darracq S.A., Seine, France.

GERMANY

Bayerische Motoren Werke Aktiengesellshaft (BMW), Munchen 13, Germany.
Carl F. W. BORGWARD, Bremen, Germany.
Daimler-Benz A.G., Stuttgart-Unterturkheim, Germany.
FORD-Werke A.G., Koln-Niehl, Germany.
GOGGOMOBIL, see Hans Glas Isaria.
GOLIATH-Werk G.M.B.H., Bremen 11, Osterdeich 222, Germany.
Hans Glas Isaria-Vertriebs-KG, Dingolfing, Bayern, Germany.
ISETTA, see BMW.
LLOYD Motoren Werke GMBH, Bremen, West Germany.
MAICO Fahrzeug fabrik Gmbh, Herrenberg-Wuerttemberg, Germany.
NSU Aktiengesellschaft, Neckersulm, Germany.
Adam OPEL, Aktiengesellschaft, Russelsheim Am Main, Germany.
Dr. Ing. h.c. F. PORSCHE K.G., Stuttgart-Zuffenhausen, Germany.
VOLKSWAGENWERK GMBH, Wolfsburg, Germany.

HOLLAND

DAF, see Van Doorne's, Van Doorne's Automobielfabriek N.V., Eindhoven, Holland.

IRELAND

HEINKEL, see International Sales, Ltd.
International Sales Ltd., Dublin, Eire.

ITALY

ALFA-ROMEO, via M.U. Traiano, 33, Milano, Italy.
FERRARI Automobili, Modena, Italy.
FIAT, Turino, Italy.
LANCIA & CO., Torino, Italy.

JAPAN

NISSAN Motor Co., Ltd., Shinkoyasu, Yokohama, Japan.
PRINCE Motor Sales Co., Ltd., Tokyo, Japan.
TOYOTA Motor Co., Ltd., Koromo-shi, Aichi-Ken, Japan.

SPAIN

Sociedad Espanola De Automoviles De Turismo, S.A. (S.E.A.T.), Barcelona, Spain.

SWEDEN

SAAB, see Svenska Aeroplan Aktiebolaget.
Svenska Aeroplan Aktiebolaget, Trollhattan, Sweden.
Aktiebolaget VOLVO, Goteborg 1, Sweden.

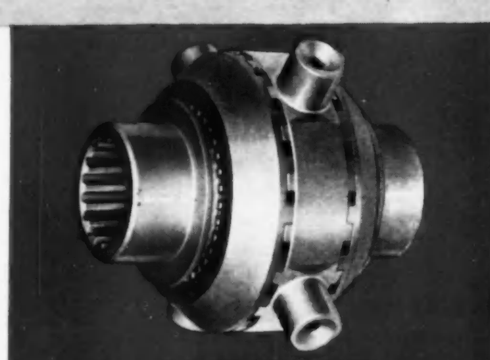
TRUCKS

For details of their products see pages 122-129.

American-Coleman Co., Littleton, Colorado.
CHEVROLET Motor Div., General Motors Corp., Detroit 2, Mich.
COLEMAN, see American-Coleman Co.
DIAMOND T Motor Truck Co., Chicago 23, Ill.
DIVCO Truck Div., Divco-Wayne Corp., Detroit 5, Mich.
DODGE Div., Chrysler Corp., Detroit 31, Mich.
DUPLEX Div., Warner & Swasey Co., Lansing 4, Mich.
FABCO, see F.A.B. Mfg. Co.
F.A.B. Mfg. Co., Oakland 8, Calif.
FEDERAL Motor Truck Co., Detroit 9, Mich.
FORD Div., Ford Motor Co., Dearborn, Mich.
FWD, see Four Wheel Drive Auto Co.
Four Wheel Drive Auto Co., Clintonville, Wis.
Freightliner Corp., Portland 11, Oregon.
KENWORTH Motor Truck Corp., Seattle 14, Wash.
MARMON-HERRINGTON Co., Inc., Indianapolis 7, Ind.
OSHKOSH Motor Truck, Inc., Oshkosh, Wis.
PETERBILT Motors Co., Oakland 5, Calif.
REO Div. of White Motor Co., Lansing 20, Mich.
STUDEBAKER Div., Studebaker-Packard Corp., South Bend 27, Ind.
TRUCKSTELL Mfg. Co., Cleveland 14, Ohio.
WALTER Motor Truck Co., Ridgewood, L. I., N. Y.
WARD LA FRANCE Truck Corp., Elmira Heights, N. Y.
WHITE-FREIGHTLINER, see Freightliner Corp.
WILLYS Motors Inc., Toledo 1, Ohio.

(Turn to page 356, please)

NoSPIN DIFFERENTIALS . . .



FITS MOST TRUCKS AND CARS . . .

STOP Wheel Spin—to keep Your Equipment Moving . . . and Earning

You get more profit-earning work from automotive equipment—light or heavy, on- or off-the-road types—equipped with NoSPIN Differentials. The NoSPIN automatically directs available torque to the drive wheel having traction to give you (or your customer) full-time control. You obtain maximum traction under all operating conditions.

There's a NoSPIN Differential for use with most axles for all types of (gasoline or diesel) heavy-duty equipment, as well as commercial trucks. They can be originally specified or distributor supplied for replacement use. NoSPINS are low in cost, easily installed and need minimum maintenance.

If you build, use or service automotive equipment, investigate what NoSPIN Differentials can do for you. Your customers or operators will appreciate the added safety and savings of full-time protection against accidents and operational losses due to wheel spin.

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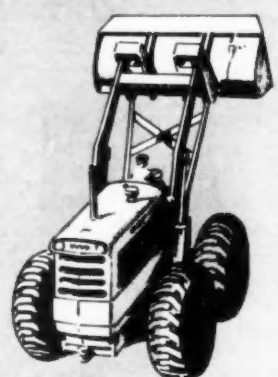
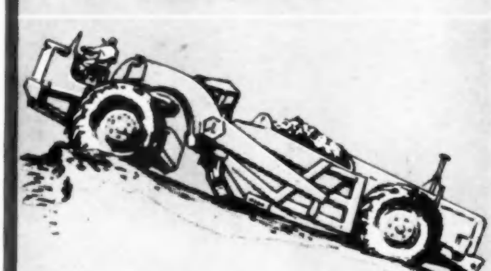
Write today for descriptive literature on the NoSPIN line . . .

. . . LIFT TRUCKS



. . . LOADERS



. . . HEAVY ROADBUILDING EQUIPMENT

DETROIT AUTOMOTIVE PRODUCTS CORPORATION

Manufacturers of **THORNTON** *Four-Rear-Wheel* **DRIVES,** NoSPIN *Differentials and Super* **LOAD-BOOSTER** *third axles*

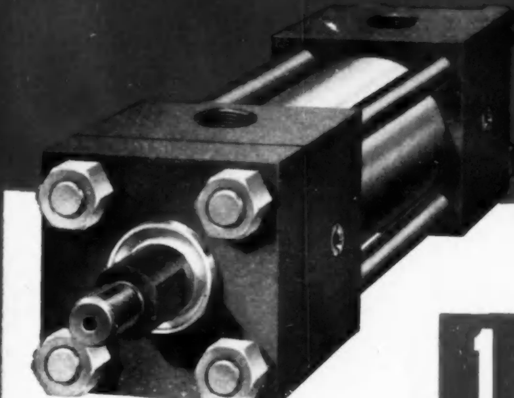
8705 GRINNELL AVENUE DETROIT, 13, MICHIGAN, U. S. A.

Circle 205 on Inquiry Card, for more Data

Circle 206 on Inquiry Card, for more Data →

SEAL FAILURE MEANS CYLINDER FAILURE

Petroleum base, fire-resistant and special hydraulic fluids cause distortion and rapid deterioration of the seals currently used in many hydraulic cylinders, resulting in costly repairs and cylinder failure. (Seals made of synthetic rubber are not compatible with even 50% of available commercial petroleum base fluids and the life of such seals is materially reduced at operating temperatures above 150° F.)

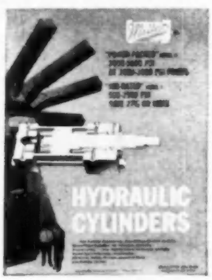


Specify Miller

HYDRAULIC CYLINDERS

FOR UNLIMITED SEAL LIFE!

Request Bulletin JH-104N for complete data plus helpful charts on column strength, cylinder forces, factors of safety, acceleration, pipe pressure losses, etc.



1 ALL TEFLON* SEALED Against External Leakage

TEFLON is impervious to all known hydraulic fluids, including all fire-resistant and special types—and withstands temperatures from −100°F. to plus 450°F.

TEFLON SHEF SEAL AT TUBING ENDS

No blind assembly. Is
Shear-proof
Heat-proof
Extrusion-proof
Fluid-proof

TEFLON SEALS ON PISTON ROD AND BUSHING

Teflon rod flange seal requires no adjustment. Teflon bushing seal is shearproof. Teflon wiper keeps dirt out.

TEFLON SEALS ON BALL CHECK AND ADJUSTING SCREW

Non-protruding, self-locking, cushion adjusting screw interchangeable with ball check for easy access.

2 CASE-HARDENED CHROME PLATED PISTON RODS

Provide foolproof protection against seal failures resulting from rod damage. The Miller case-hardened rods (50-54 Rockwell C) give practically complete immunity to damage from hammer blows, wrench-dropping, mishandling, etc. The hard chrome plating over the case-hardened rods protects against scratch-damage and rust.

AVAILABLE IN TWO TOP QUALITY LINES

JOB-RATED
Model "J"

PRICE SAVINGS OF 27% OR MORE!

19 mounting styles, all strokes, cushioned and non-cushioned. Large selection for immediate shipment.

BORE	SEVERE OPERATING CONDITIONS	MODERATE OPERATING CONDITIONS	YOU SAVE THIS % IN PRICE OVER STANDARD 2000-3000 PSI CYLINDERS
1½"	1500 PSI	2500 PSI	27%
2	1500	2500	27%
2½	1000	1500	28%
3¼	1500	2500	32%
4	1000	1500	35%
5	800	1200	37%
6	800	1200	43%
8	500	800	50%
10	500	800	71%
12	500	800	76%
14	500	800	*Not Available in 2000-3000 PSI*

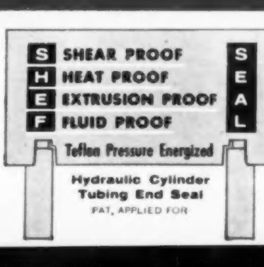
POWER-PACKED
Model "H"

50% More Power Per Cylinder Dollar!

For
3,000-5,000 P.S.I.

1½" through 12" bores, 17 mounting styles, strokes up to 22 ft., cushioned and non-cushioned. Large selection for immediate delivery.

*DuPont trademark for its tetrafluoroethyline resin



OTHER MILLER QUALITY FEATURES

- Solid Steel Heads, Caps and Mountings.
- Precision-Honed Barrels.
- Rust-Resistant Coating on All Non-Wearing Surfaces.
- Space-Saving "Square" Design.

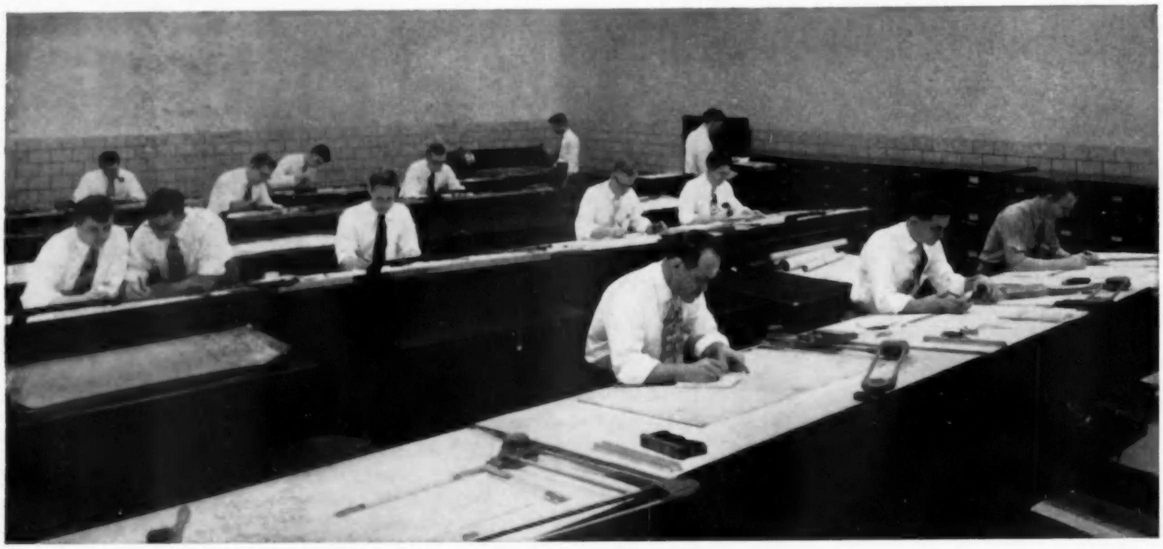
MILLER FLUID POWER

DIVISION OF FLICK-REEDY CORPORATION

2028 N. Hawthorne Ave., Melrose Park, Illinois

AIR AND HYDRAULIC CYLINDERS • ACCUMULATORS
COUNTERBALANCE CYLINDERS • BOOSTERS

. . . how four of the engineering help you . . . the



❶ The advanced product and process engineers at each of our plants are available to assist you with the casting design considerations. It is Central Foundry's practice to suggest design changes that ordinarily do not affect the part functionally, but often reduce casting weight, thus reducing casting costs. Your blueprints are returned to you with parting line, coring and gate locations as well as suggested changes in casting design clearly marked.

Our engineering staff is specialized to give you expert assistance in each of the metals Central Foundry produces. When you are considering castings of ArmaSteel, malleable iron or grey iron to be cast in either green sand molds or by the more exacting shell mold process, contact the sales department of Central Foundry Division.

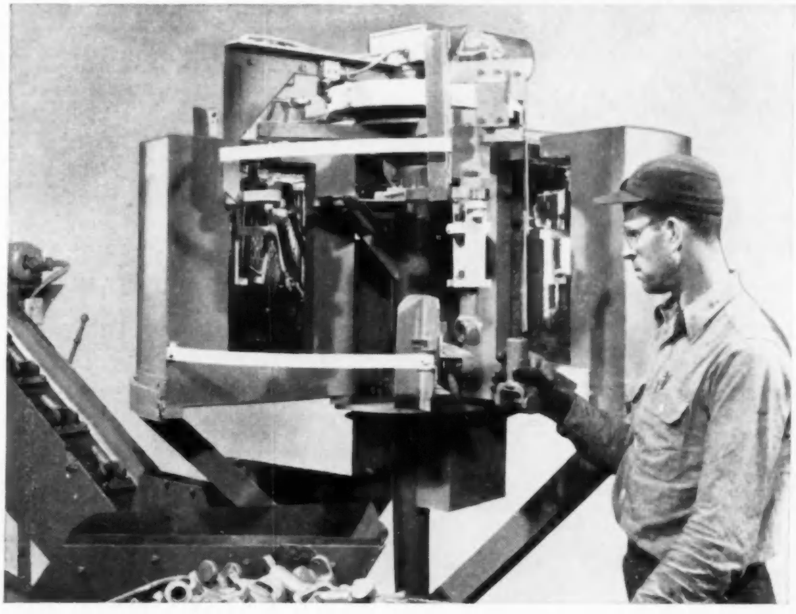
❷ Cobalt 60 radiography, a fast, positive method of detecting sub-surface defects, has replaced time consuming breaking, cutting and etching of castings, formerly used by the foundry industry to check new parts for soundness. This technique does not demand destruction of the part and gives positive location of any defects. With radiographs as a guide, our engineers can make necessary changes in gating, feeding and general design that assure quality castings at reduced cost, and do it in hours compared to days required for breaking or cutting.

CENTRAL FOUNDRY DIVISION · GENERAL MOTORS CORPORATION

CENTRAL FOUNDRY DIVISION

services at Central Foundry design engineer

❸ **Stress Analysis** is also used at Central Foundry in the design or redesign of castings to reduce weight and improve mechanical strength. By an accurate study of stress, both statically and dynamically, Central Foundry engineers are able to suggest design changes, to put metal where it is needed, remove excess material, to recommend the best material for your part and thus assure the highest quality castings at the lowest possible cost.

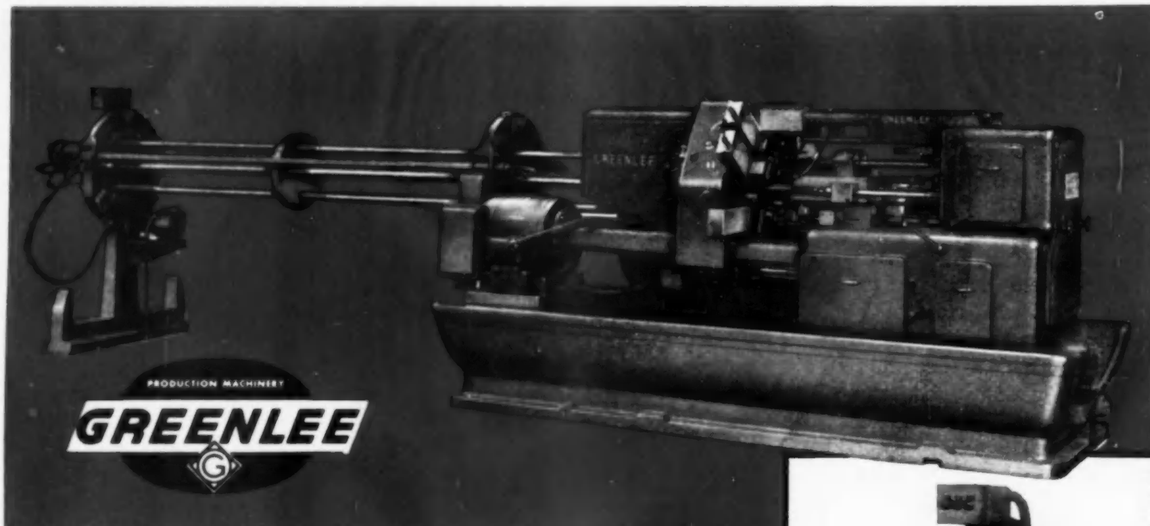


❹ **Sonic testing** is an electronic listening device developed by Central Foundry that automatically distinguishes between the vibrations of good and faulty castings and sorts them accordingly. The sonic testing machine, much faster and more accurate than visual inspection, eliminates human error and is ideally suited to high production of castings designed for critical applications.

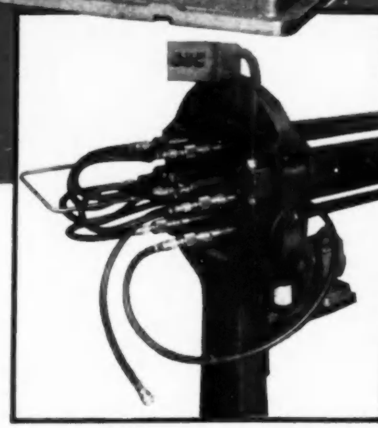
Central Foundry, with plants in Saginaw, Michigan, Defiance, Ohio, and Danville, Illinois, has the vast facilities and engineering services necessary to deliver, on schedule, quality castings in production quantities. Our sales engineers, product development engineers, foundry engineers and modern engineering services are all available to help you get quality castings . . . at low cost . . . in less time.

MEMBER MALLEABLE CASTINGS COUNCIL

GENERAL MOTORS CORPORATION • SAGINAW, MICHIGAN • DEPT. 24



MULTIPLE FEED-OUTS...



A Natural

on Greenlee Air-Feed Automatics

Feed Out Stock to 16½"
Eliminate Pushers and Feed-Out Cams

Removable fittings attach air lines to the stock reel tubes. A vacuum pump withdraws the piston when restocking. Push-button control panel is provided for starting and stopping.

Greenlee Air-Feed Automatics offer you a 3-way profit advantage:

1. Maintenance and change-over time is reduced by eliminating stock pushers, feed tubes and feed-out cams.
2. Stock can be automatically air-fed to position in one or more machining stations permitting two or more pieces per cycle.
3. Multiple feed-out flexibility enables you to finish machine a variety of pieces that ordinarily demand costly second operation setups.

If you are running into production headaches on a specific job, Greenlee may be able to adapt an "Air-Feed" to solve your problem. See your Greenlee Distributor.

Write for your copy of Catalog A-405 — first step on the way to more profitable production with Greenlee Automatic Bar Machines.

• • •

Greenlee Standard and Special Machine Tools

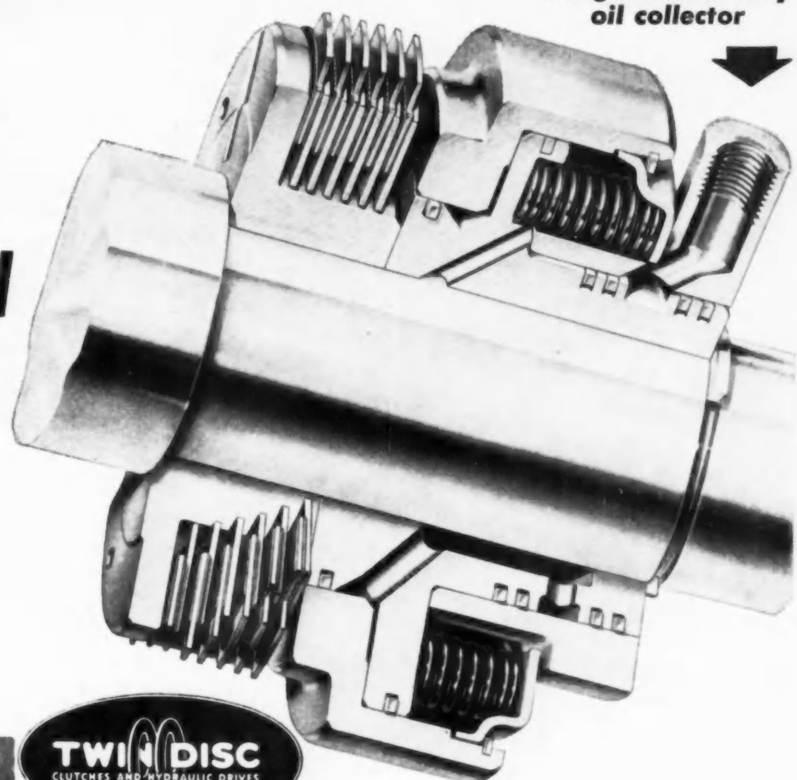
Multiple-Spindle Drilling and Tapping Machines
Transfer-Type Processing Machines
Six and Four-Spindle Automatic Bar Machines
Hydro-Borer Precision Boring Machines
Die Casting Machines

GREENLEE
BROS. & CO.

1746 MASON AVE.
ROCKFORD, ILL.

Now available with integral stationary oil collector

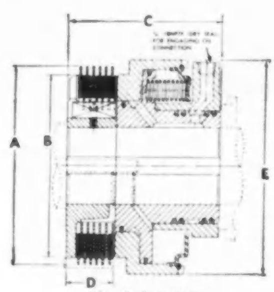
NEW Twin Disc Oil-Actuated Multiple-Plate Clutches



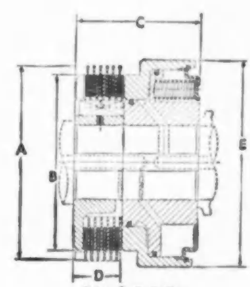
Clutch failures and burn-outs are virtually eliminated in these new wet-type Twin Disc Clutches. No adjustments are needed because ram travel compensates *automatically* for plate wear.

Designed for machine tools and similar applications, these units are built to run in oil and are actuated by oil pressure of 100 to 300 psi. Model DOC (shown above) has an around-the-shaft oil collector connected by a ¼" line. Model DO is identical except that the oil collector is omitted, shortening the clutch somewhat.

Compact design, smooth performance, long wear—with no adjustment problems—these benefits are available *now* in Twin Disc Oil-Actuated Multiple-Plate Clutches. Write for Bulletin 314.



Model DOC



Model DO

Model No.	Torque Capacity Lb. ft.	Hp Capacity	Max. Allowable Rpm		A	B	C (length)	D	E
			With Hydraulic Balance	Without Hydraulic Balance					
DO 403	37	9	5000	2700	3.31	3.00	2.580–2.588	[illegible]	3.80
DOC 403			5000	3480			3.500–3.486		
DO 403½	95	20	5900	2680	3.81	3.50	[illegible]	1.17	4.42
DOC 403½			5000	3500			3.780–3.764		
DO 604	130	31	5000	2670	4.38	4.00	3.235–3.241	[illegible]	4.80
DOC 604			5700	3660			4.160–4.155		
DO 605	330	58	4500	2270	5.50	5.00	3.447–3.439	[illegible]	5.90
DOC 605			4570	3070			4.267–4.299		
DO 706	435	100	3700	1815	6.56	6.00	3.981–3.963	[illegible]	6.90
DOC 706			3750	2560			4.870–4.854		
DO 707	690	137	3750	1790	7.62	7.00	4.691–4.579	2.12	8.00
DOC 707			3250	2550			5.540–5.572		

TWIN DISC CLUTCH COMPANY, Racine, Wisconsin • HYDRAULIC DIVISION, Rockford, Illinois

BRANCHES OR SALES ENGINEERING OFFICES: CLEVELAND • DALLAS • LOS ANGELES • NEWARK • NEW ORLEANS

Circle 209 on Inquiry Card, for more Data

Experience**—the extra alloy in **Allegheny Stainless

key words in solving production puzzles:

Allegheny for Stainless; Ryerson for Service

If one of your toughest production puzzles is getting top quality stainless steel *when* you need it, check in now with the Allegheny-Ryerson combination.

Allegheny Ludlum is the leading producer of stainless steels in all forms. And Ryerson, long recognized as the largest and best steel service center, carries Allegheny Stainless. This unbeatable team brings you the best quality stainless quick, when you need it.

Ryerson now stocks 2,351 shapes, sizes, finishes and alloys of Allegheny Stainless . . . the most complete line of stainless anywhere! And Ryerson relieves you of the inventory cost, gives you as quick service as your own stockroom.

Whether your order is for Allegheny Stainless sheet, plates, bars or whatever, Ryerson stocks it. Trained salesmen and technicians to help in selecting or in fabricating are at your service.

Call Ryerson, for top quality Allegheny Stainless from warehouse stocks. *Allegheny Ludlum Steel Corporation, Oliver Building, Pittsburgh 22, Pa.*

WSW 7124

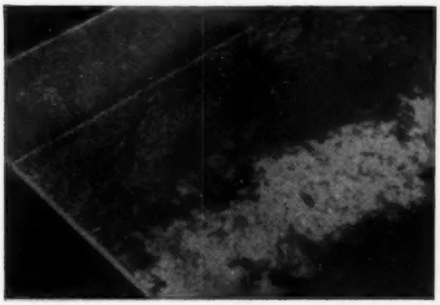
ALLEGHENY LUDLUM

for warehouse delivery of Allegheny Stainless, call RYERSON

Export distribution: AIRCO INTERNATIONAL

EVERY FORM OF STAINLESS . . . EVERY HELP IN USING IT

AL



Coolant sumps are breeding grounds for harmful bacteria. Laboratory analyses have found as many as 3 billion bacteria per ml. in emulsions that were only a few days old.

NOW, a simple, safe treatment with Elcide 75 keeps the bacteria count down and increases the useful life of standard duty soluble oil emulsions.

Bacteria Control: A new way to beat rising production costs

Many harmful types of bacteria contaminate coolant sumps and help destroy soluble oil emulsions. These bacteria first enter emulsions through the air, water, and the usual plant debris in the circulation system. They feed on the oil-water mixture until their build-up in the coolant causes odor, corrosion, and final separation of the emulsion. These microscopic organisms are costing the metalworking industry millions of dollars each year.

Now, this damage can be stopped with Elcide 75. Elcide 75 is a new bacterial inhibitor composed of two separate, but well-proven, anti-bacterial agents. One of these is related to a material that is popularly used in the exacting field of surgical practice. This powerful action controls a wider range of bacteria than the commonly used germicides now being marketed.

Elcide 75 has been carefully tested and evaluated by several large metalworking plants. Added to fresh emulsions at the rate of one ounce per each four gallons of emulsion, plant researchers found that its double control increased emulsion life up to 5½ times longer than untreated emulsions.

Extended emulsion life starts a chain reaction of decreased production costs. Less oil concentrate is needed to do the same job. The number of man-hours required for servicing machine sump tanks and disposing of waste oil is greatly reduced. Production increases because the machines run longer between emulsion changes. Additional benefits gained from the use of Elcide 75 include reduced corrosion of tools and products, and elimination of rancid odors.

Try Elcide 75 in your plant and total up your savings. You'll be pleasantly surprised to find out just how important bacteria control is to good plant management.

ELCIDE 75 ™

PATENT PENDING

KEEPS COOLANTS FRESH AS A DAISY!

ELCIDE 75: SPECIFICATIONS

(Lilly's brand of bacterial inhibitor for cutting fluids)

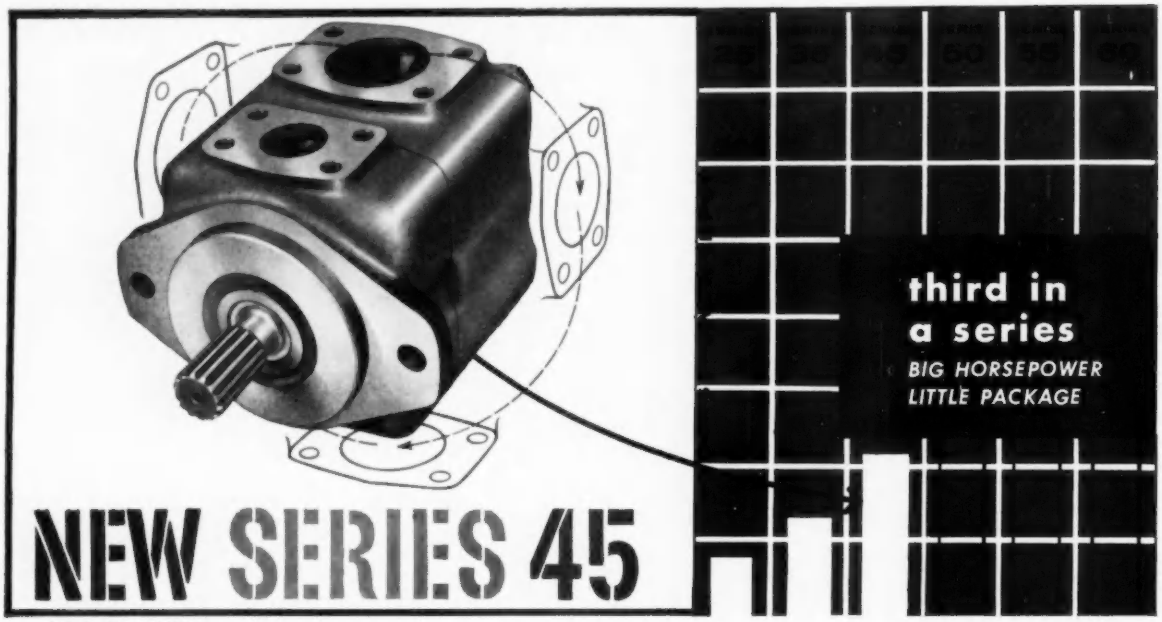
Active Ingredients—Sodium Ethylmercuri Thiosalicylate (Thimerosal) and Sodium o-phenylphenate

Package	Price per Gal.
1-gal. (4 per case), polyethylene	$8.50
5-gallon, polyethylene	$8.00
55-gallon, stainless steel	$6.50

Sold only through selected distributors. For more information or to place your order, phone or write:

ELI LILLY AND COMPANY • AGRICULTURAL AND INDUSTRIAL PRODUCTS DIVISION • INDIANAPOLIS 6, INDIANA • TELEPHONE: MELROSE 6-2211

Circle 211 on Inquiry Card, for more data



PATS. & PATS. PENDING

VICKERS® "high performance" vane pump

• high speed • high pressure • high efficiency • high service life

NEW COMPACT DESIGN . . . much more horsepower than previous pumps of the same package size.

NEW VANE CONSTRUCTION . . . positive vane tracking at all operating speeds assures efficient operation at increased speeds and pressures.

NEW SIZES not previously available . . . answers mobile equipment designers' need for greater hydraulic horsepower in limited space.

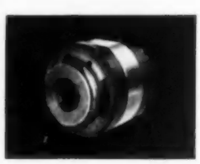
NEW PARTS INTERCHANGEABILITY . . . many common parts for single and double pumps (two pumps on the same shaft in one envelope). Lessens inventory requirements.

NEW 4-BOLT SAE FLANGE CONNECTIONS . . . will also accommodate user's 2-bolt flanges of the proper design.

NEW 2-BOLT MOUNTING (SAE 1959 STD.).

NEW 4-POSITION COVER . . . inlet can be rotated in 90° increments with respect to outlet.

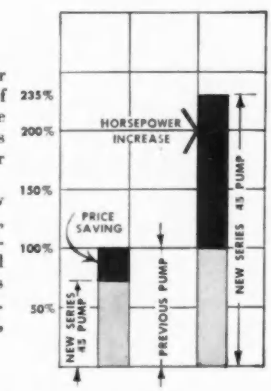
NEW REPLACEABLE PUMPING CARTRIDGE . . . all wearing parts of pump are incorporated in one replaceable cartridge. Easy field replacement without removing pump from its mount. Cartridges available in kit form.



MUCH MORE HORSEPOWER PER DOLLAR

The striking increase in horsepower per dollar of the Series 45 over previous pumps of the same delivery capacity is shown in the graph to the right. Maximum horsepower is more than double (235%) and price is lower by 35%.

This is the third unit released in the new complete line of "High Performance" Pumps, single and double. The first (Series 25) is available in 12, 14 and 17 gpm sizes and the second (Series 35) comes in 21, 25 and 30 gpm sizes (at SAE rating of 1200 rpm and 100 psi). This new Series 45 pump is available in 35, 42 and 50 gpm sizes.



The table below shows characteristics

Model Number	Delivery—gpm		Input Horsepower @ 2000 rpm 2000 psi	Package Size†	Weight
	1200 rpm 100 psi	2000 rpm 2000 psi			
2V35A-1*10	34	52	71	L. 7¾" W. 6¼" H. 6½"	69 Lbs.
2V42A-1*10	41	63	86		
2V50A-4*10	48	75	103		

†Exclusive of Shaft Extension and Mounting Lobes

8201

Write for new illustrated Bulletin No. M5108 for further details and performance characteristics.

VICKERS INCORPORATED
DIVISION OF SPERRY RAND CORPORATION
Mobile Hydraulics Division
ADMINISTRATIVE and ENGINEERING CENTER
Department 1428 • Detroit 32, Michigan

Application Engineering Offices: • ATLANTA • CHICAGO • CINCINNATI CLEVELAND • DETROIT • GRAND RAPIDS • HOUSTON • LOS ANGELES AREA (El Segundo) • MINNEAPOLIS • NEW YORK AREA (Springfield, N.J.) PHILADELPHIA AREA (Media) • PITTSBURGH AREA (Mt. Lebanon) PORTLAND, ORE. • ROCHESTER • SAN FRANCISCO AREA (Berkeley) SEATTLE • ST. LOUIS • TULSA

ALSO SOLD AND SERVICED IN AUSTRALIA, ENGLAND, GERMANY & JAPAN
IN CANADA: Vickers-Sperry of Canada, Ltd., Toronto, Montreal & Vancouver

ENGINEERS AND BUILDERS OF OIL HYDRAULIC EQUIPMENT SINCE 1921

Circle 213 on Inquiry Card, for more Data

Circle 214 on Inquiry Card, for more Data →

10 hours' work in an 8-hour shift!

That's the production advantage of the Yale Industrial Tractor Shovel

Here are the features that make the Yale Industrial Tractor Shovel outstanding...

PRECISELY CONTROLLED HORSEPOWER! 72 hp. 6 cylinder engine provides smooth power through matched torque converter and Yale torque transmission (fully automatic). One speed in both directions. Inching control permits delicate close-quarter maneuvering. Extra punch for impact loading. Accelerates to 13 mph. in 5½ seconds.

PERFORMANCE! 2500 lb. carry capacity. Exclusive 45° bucket tipback permits faster loading and lowest carry position for faster transport with minimum spillage. 6' dumping clearance permits dumping into bins and hoppers out of range of other—even larger—tractor shovels. Shortest turning radius, too—only 73".

SAFETY! Safety-curve lifting mechanism members never rise alongside the operator. Front and back working lights provide extra security.

DEPENDABILITY! Rugged design • sealed brakes and electrical system • protected steering linkage • 10 ply tires—all adds up to more work at less cost...more production hours. Full range of buckets and attachments available.

Field applications prove that these features add up to 25% more work per hour—10 hours' work in an 8-hour shift. For a demonstration in your plant or complete information contact your Yale representative. Or write The Yale & Towne Manufacturing Company, Yale Materials Handling Division, Dept. YT 2-V.

Yale Materials Handling Division, a division of The Yale & Towne Manufacturing Company. **Manufacturing Plants:** Philadelphia, Pa., San Leandro, Calif., Forrest City, Ark. **Products:** Gasoline, Electric, Diesel and LP-Gas Industrial Lift Trucks • Worksavers • Warehousers • Hand Trucks • Industrial Tractor Shovels • Hand, Air and Electric Hoists

interchangeable with all standard JIC cylinders

With the introduction of the ALL NEW T-J Squair Head, Tomkins-Johnson now offers industry the most complete design range of air and hydraulic cylinders. Presently available in bore diameters from 1½ to 8 inches, the T-J Squair Head is an interchangeable cylinder which produces maximum force and efficiency, with minimum pressures . . . and is also adaptable to the use of low pressure oil as the working medium. Write to The Tomkins-Johnson Co., Jackson, Michigan, for Bulletin #SQ 10-58 and complete details.

CHECK THESE 10 POINTS OF T-J SUPERIORITY

1 One Piece Piston

2 Hard Chrome Cylinder Bore and Piston Rods

3 High Tensile Steel Tie-Rods

4 Cushion Adjusting Screw, Externally Adjustable

5 New Super-Cushion for air, or Self-Aligning Master Seal for Oil (T-J Patents)

6 Solid Steel Heads and Mounting Plates Standard all Models

7 Port Design Allows Minimum Pressure Drop on Inlet or Outlet

8 Chevron Type, Self-Adjusting Rod Packing

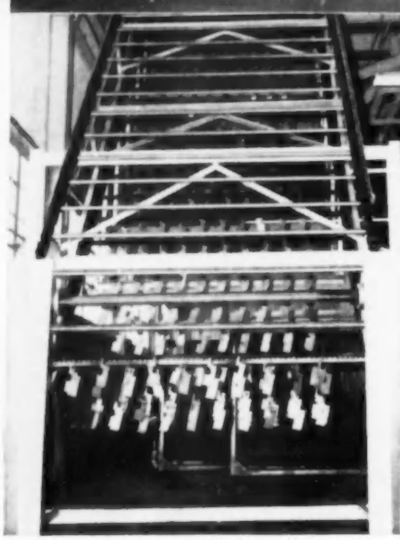
9 Piloted Packing Gland—Absolute Alignment

10 Piston Rod, Extra Strong—Polished and Chrome Plated for Efficiency and Protection

T-J TOMKINS-JOHNSON

Circle 216 on Inquiry Card, for more Data

FINISHING SYSTEMS...



The 8 Ft. wide Crossbar Conveyor carries a variety of products and a great mass of small parts through all processing units of the Dip Coating System. The Crossbars in the Conveyor are designed for a work load of 250 lbs.

Complete Mahon Installation Provides Compact Facilities for DIP COATING and SPRAY PAINTING in CUTLER-HAMMER'S Lincoln, Illinois Plant!

In this unique finishing system, the greater part of which is located on the roof, Mahon engineers have employed what is probably the longest continuous crossbar conveyor ever designed into equipment of this type.

The painting enclosure shown above is inside the large electrical plant. This enclosure is divided into two sections, one of which has a paint mixing room on the ground floor and paint Dip Tanks on a mezzanine floor above. The other section houses two Spray Booths and a Batch-Type Finish Baking Oven. The conveyorized, Five-Stage Metal Cleaning and Rust Proofing Machine, Dry-Off Oven, Finish Baking Oven and the Filtered Air Supply Equipment are housed in one enclosure on the roof.

This is the third complete finishing system installed by Mahon in Cutler-Hammer Plants across the country.

If you have a finishing problem, or are contemplating new finishing equipment, you, too, will want to discuss methods, equipment requirements and possible production layouts with Mahon engineers . . . you'll find them better qualified to advise you, and better qualified to do the initial planning and engineering which is so important in specially designed equipment of this type.

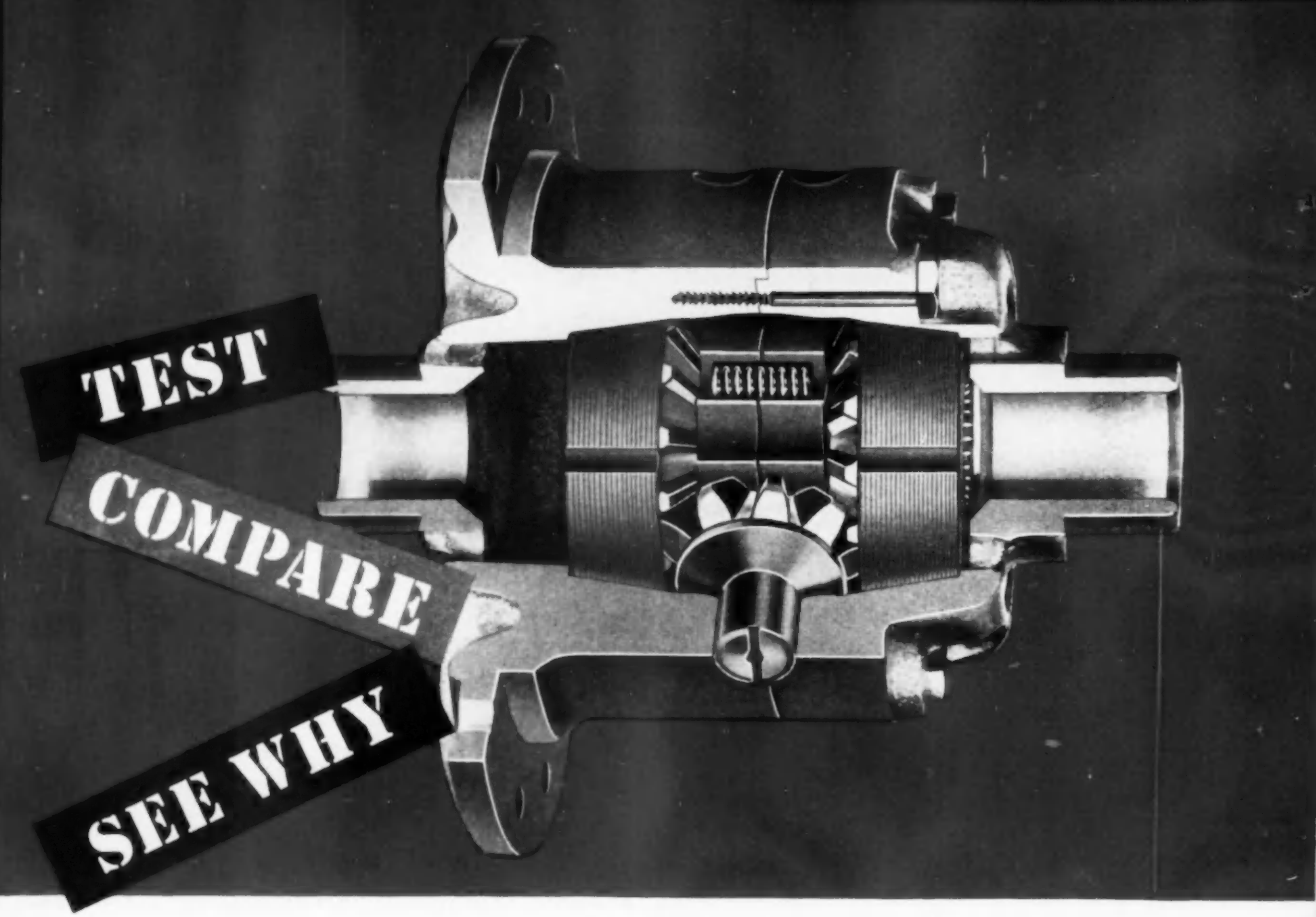
See Sweet's Plant Engineering File for Information, or Write for Catalogue A-659

THE R. C. MAHON COMPANY • Detroit 34, Michigan

SALES-ENGINEERING OFFICES in DETROIT, NEW YORK and CHICAGO

. . . the EXPERIENCE that goes into the PLANNING and ENGINEERING of MAHON EQUIPMENT is the item of GREATEST VALUE to YOU!

MAHON



WARNER SPIN-RESISTANT DIFFERENTIAL

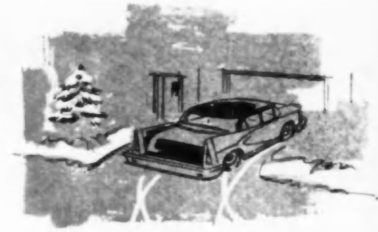
Gives Superior Performance

No matter what the weather or road condition—rain, snow, ice, sand, gravel, mud—the new Warner Spin-Resistant Differential keeps cars on the go. With power automatically transferred to the wheel with the greater traction, *pre-loaded* cone brakes and side gear thrust smoothly brake the other wheel.

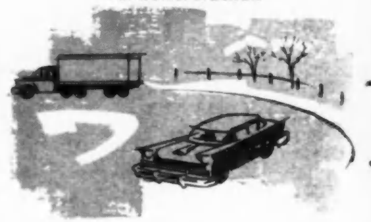
That virtually eliminates wheel spin, greatly reduces dangerous skids and swerves, ends tire scuffing from wheel bounce. And that means sure-footed driving for cars, trucks, fork lifts and other vehicles.

Equally important is what the Warner Spin-Resistant Differential WON'T do. It *won't* become noisy, *won't* cause full locking of either axle shaft, *won't* interfere with normal steering, *won't* develop excessive backlash.

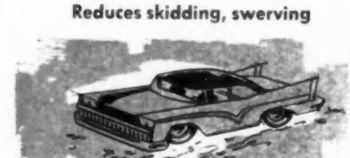
That all adds up to better, more dependable performance, greater user satisfaction. Why not see for yourself. Write, wire or telephone for full information.



Retards wheel spin for better traction



Reduces skidding, swerving



Ends tire scuffing from wheel hop

WARNER AUTOMOTIVE
B-W
BORG-WARNER

WARNER AUTOMOTIVE

Warner Automotive Division, Borg-Warner Corporation

AUBURN, INDIANA

Circle 219 on Inquiry Card, for more Data

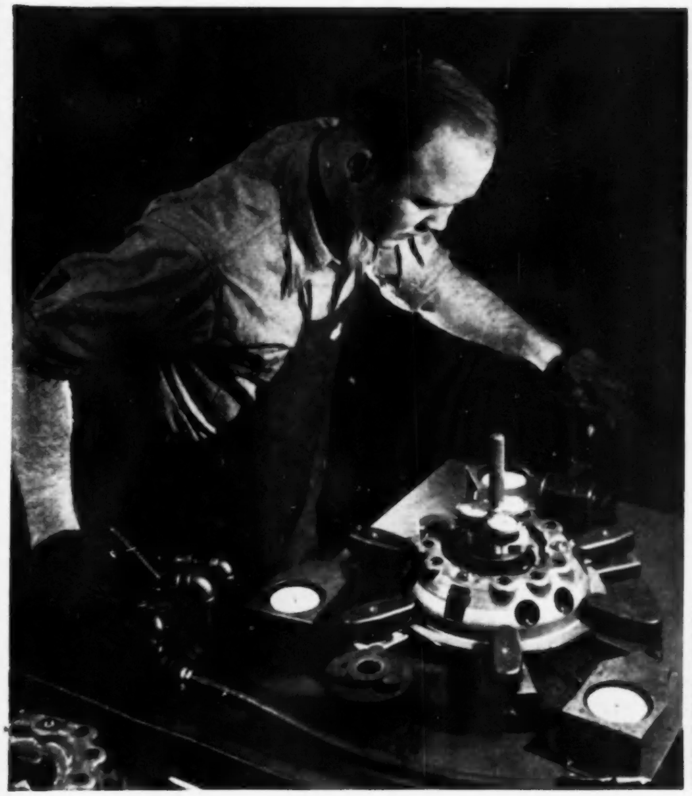
Quality Control is a BORG & BECK tradition that means

BETTER CLUTCHES

At Borg & Beck, quality control is not just a phrase to which we pay lip service. It is a tradition born of the long-standing Borg & Beck policy of building up to a standard—not down to a price.

In the photograph at the left, for example, release levers are being checked on special equipment to make sure they are parallel with the pressure plate. As shown at the right, every Borg & Beck clutch plate is carefully tested for correct deflection to assure positive release. And every driven plate and cover assembly is dynamically balanced for maximum smoothness of operation.

These exacting tests are typical of the extra care that goes into every step in the making of Borg & Beck clutches. They are your assurance of top quality, top performance, top value. And that means: BETTER CLUTCHES.



BORG & BECK CLUTCH · THE STANDARD

Reg. U.S. Pat. Off.

BORG & BECK · B-W · BORG-WARNER ®

BORG & BECK®

THE AUTOMOTIVE STANDARD FOR MORE THAN 40 YEARS

BORG & BECK DIVISION, BORG-WARNER CORPORATION, CHICAGO 38, ILLINOIS

Export Sales: Borg-Warner International, 36 S. Wabash, Chicago 3

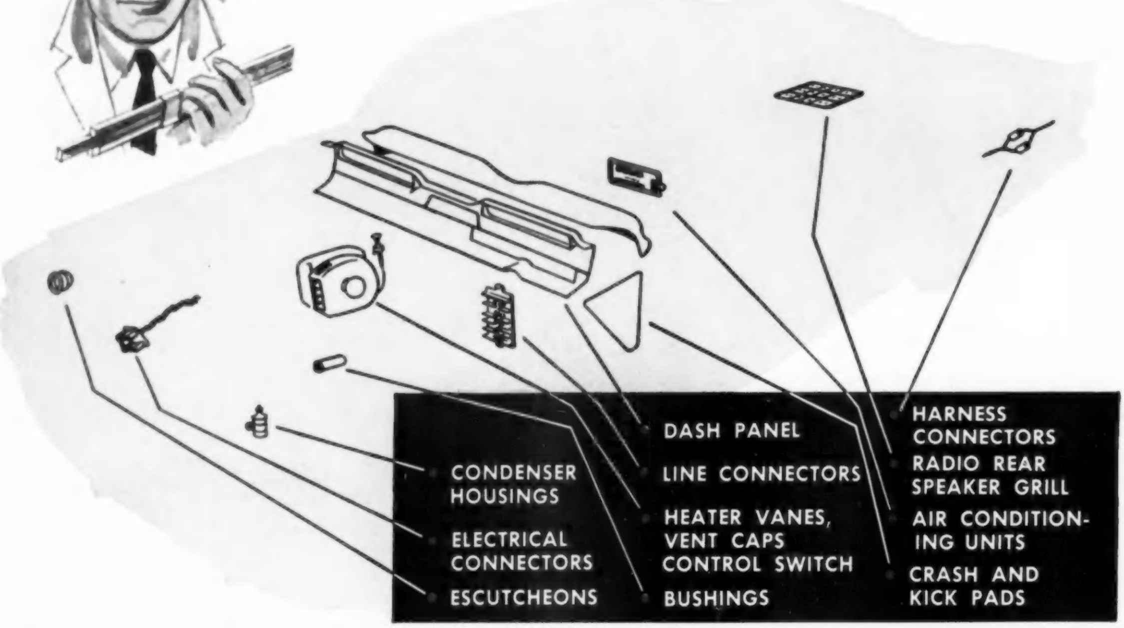
Circle 220 on Inquiry Card, for more Data

CYCOLAC®

THE TOUGH, HARD ABS PLASTIC
from BORG-WARNER

SERVES THE AUTOMOTIVE INDUSTRY

with economical, long-lasting parts and assemblies!



BETTER IN *MORE* WAYS THAN ANY OTHER PLASTIC!

Only Cycolac combines so many advantages in one versatile material! It's rigid—it's tough—it gives you high impact resistance, even at temperature extremes. Cycolac meets your demands for rugged duty *without* requiring increased sections. It brings you every design and economic advantage of plastic molding and vacuum forming. Get extra quality and extra performance per dollar with Cycolac.

the New dimension in design . . . the New element in production!

only CYCOLAC has all these advantages!

- Superior Impact Strength at Low Temperatures
- Rigidity — at High Temperatures
- Easily metallized
- Corrosion, Stain Resistant
- Tough, Hard Surface
- Wide Range of Colors
- Can Be Painted
- Good Electrical Properties
- Dimensional Stability

WRITE FOR COMPLETE INFORMATION TODAY!

PACESETTER IN
Marbon CHEMICAL
SYNTHETIC RESINS

Division of BORG-WARNER • Washington, W. Va.

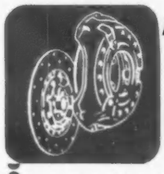
also represented by:
WEST COAST: Harwick Standard Chemical Co., Los Angeles, Cal.
CANADA: Dillons Chemical Co. Ltd., Montreal & Toronto
EXPORT: British Anchor Chemical Corp., New York

Circle 221 on Inquiry Card, for more Data

ROCKFORD

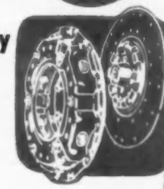
Small Spring Loaded Clutches

For foot pedal controlled vehicles and implements. With or without dampener. Cushion type plate. Flat or cupped cover. 6" to 11" sizes. Capacity 50 to 325 foot pounds. S.A.E. Housings.



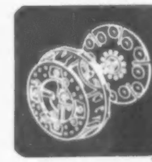
Automotive Spring Loaded Clutches

For foot pedal controlled automotive vehicles where cushioning is required for starting and shifting gears. Single dry plate. 8" to 15" sizes. Capacity 100 to 1000 foot pounds. Standard S.A.E. housings.



Heavy-Duty Spring Loaded Clutches

For tractors and pedal controlled vehicles requiring starting and shifting cushioning. Single or double dry plate. 11" to 16" sizes. Capacity 300 to 1950 foot pounds. Standard S.A.E. housings.

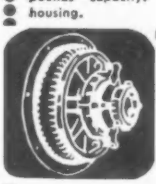


Morlife® Spring Loaded Clutches

For heavy duty off-the-road machines requiring cushioned engagement. Single or double plate. 12" to 16" sizes. Capacity 600 to 2530. S.A.E. standard housings.

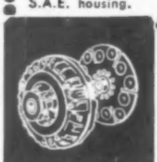
Spline-Drive Over-Center Clutches

For machines requiring long periods of locked-in roller cam controlled engagement or disengagement. Single or double plate. Oil or dry operation. 8" to 16" sizes. 210 to 1630 foot pounds capacity. Standard S.A.E. housing.



Gear-Drive Over-Center Clutches

For machines requiring "over center" and "release" locked-in position clutching. Roller cam operation. Single or double plate. Resists shock loading. 6½" to 18" sizes. 125 to 3235 foot pounds capacity. Standard S.A.E. housing.



Morlife® Over-Center Clutches

For heavy duty off-the-road machines requiring cam controlled clutches. Single or double plate. 12" to 16" sizes. Single or double plate. Standard S.A.E. housing. Capacity 1500 to 3000 foot pounds.

How to Specify the RIGHT CLUTCH For Your Particular Need

FIRST – Decide what the clutch *must do* to make YOUR product operate most efficiently.

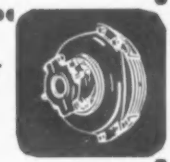
NEXT – Decide the Type, Size, Shape, Strength, Stamina and Work-Life the clutch *must have* to meet YOUR particular need.

THEN – Let Clutch Engineers contribute their specialized experience to help solve YOUR clutch problem.

ROCKFORD Clutch Engineers will bring you complete information concerning the practical application of any of the clutch types shown here:

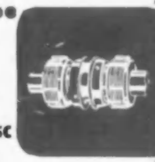
SEND FOR THIS HANDY BULLETIN
Shows unique ROCKFORD CLUTCH and POWER TAKE-OFF applications. Contains diagrams, dimensions, capacity tables, etc.

ROCKFORD CLUTCH DIVISION BORG-WARNER
209 Catherine Street, Rockford, Illinois, U. S. A.



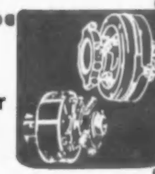
Live-Power Take-Off Clutches

For machines requiring over-center PTO operation, independent of spring-loaded propulsion control. Single, double or triple plate. Capacity 120 to 400 foot pounds.



Single or Double Oil or Dry Multiple-Disc Clutches

For machines requiring powerful, hand operated control, within limited space. Capacity 126 to 11,000 inch pounds. 1-11/16" to 8¾" diameter. 2½" to 9¾" length.

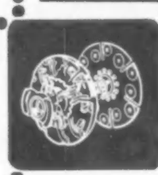


Light Over-Center Clutches

For machines requiring toggle-type, Over-center, belt, sprocket, thru-shaft or cut-off coupling drive. 3½", 4½", 5½" sizes. Capacity 360 to 1080 inch pounds.

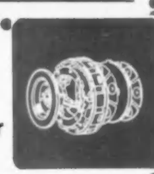
Heavy Duty Power Take-Offs

Complete self-contained units. Gear tooth, over-center clutches. Capacity 125 to 3000 foot pounds. Organic or Morlife clutch facings. No. 00, O, 1, 2, 3, 4, 5, 6 S.A.E. housings.



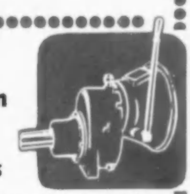
Over-Center Air-Flow Morlife® Clutches

For heavy-duty service .15" Spline-drive type. Maximum air cooling. Over-Center cam action. 1440 foot pounds torque capacity.



Double Plate Over-Center Clutches

For large, crawler type tractors where high torque capacity is required in limited space. Brake plate mounted on ball bearing type release sleeve. 16" Over-Center size. Capacity 1630 foot pounds.

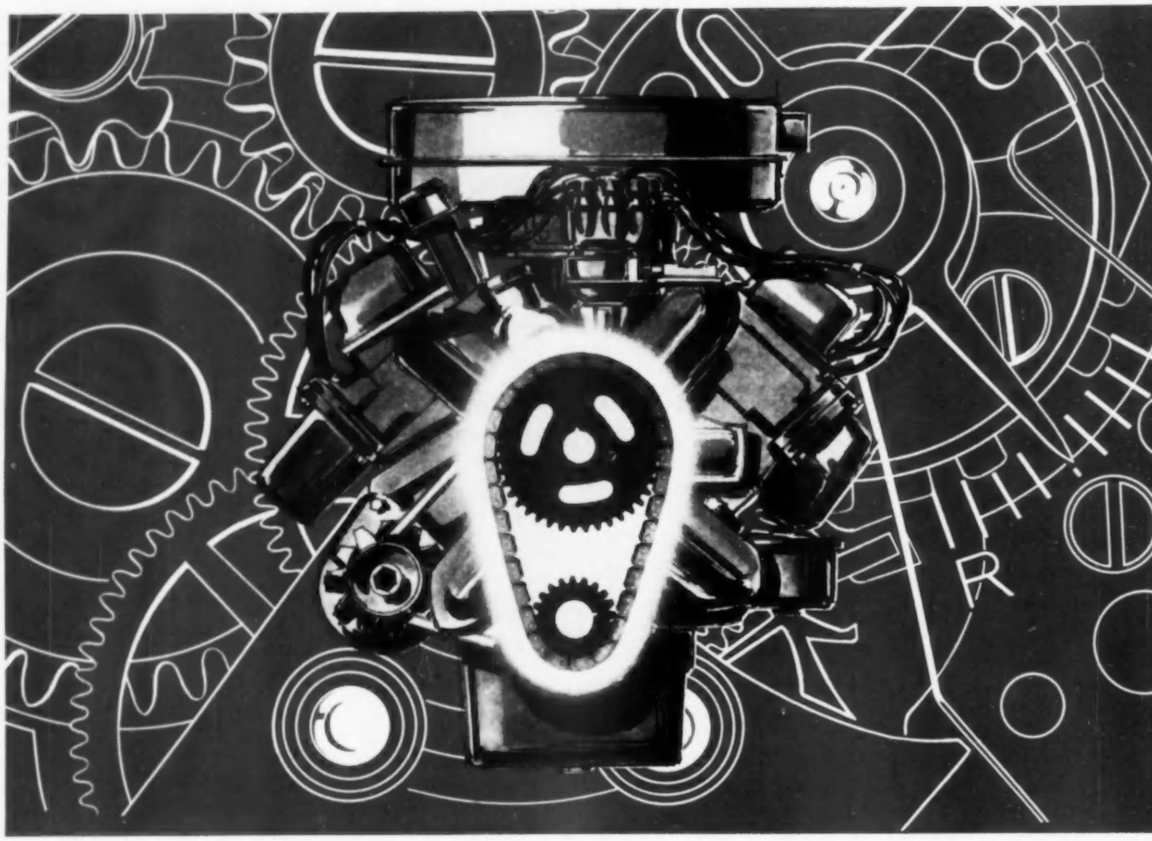


Gear Reduction Speed Reducers

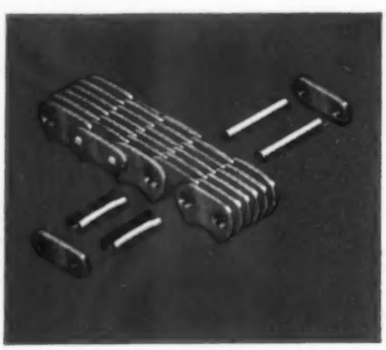
Incorporate a heavy duty power take-off and a gear reduction in one unit. Used where output shaft speed is to be slower than engine speed. 125 to 1850 foot pounds capacity. Standard S.A.E. housing.

CLUTCHES

Circle 222 on Inquiry Card, for more Data



Precise as a watch . . . and nearly as quiet, Morse Silent Chain times most car engines!



Spring-bushing joint construction of Morse Timing Chain serves as a friction damping device to minimize noise and wear. This new bushing also cuts joint vibration and reduces the tendency to "whip"; provides for take-up of slack. Ask for Catalog C60-51.

Specially designed for passenger cars by Morse . . . only company that makes ALL 4 basic drives

Designed for precision timing of today's high-horsepower engines . . . engineered to passenger-car standards of quietness: this is Morse Silent Chain—original equipment on over 80,000,000 engines.

Actually, Morse Silent Chain is built like a fine watch. And exacting quality controls maintain these rigid standards; insure motorists of trouble-free timing for *extra* thousands of miles. Morse has been building this dependability into timing chain for over 55 years.

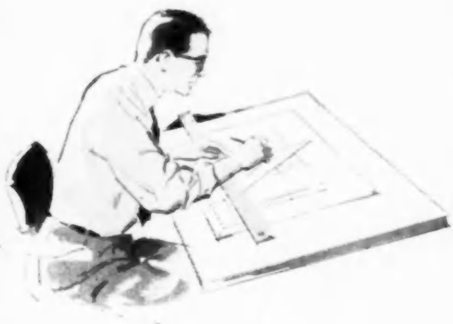
So for original equipment or replacement timing chains, check first with Morse. Want more information or practical engineering help? Call, write or wire today: Morse Chain Company, Detroit, Michigan; Ithaca, New York. Export Sales: Borg-Warner International, Chicago 3, Ill. In Canada: Morse Chain of Canada, Ltd.; Simcoe, Ontario.

MORSE MORSE B-W BORG WARNER — A BORG-WARNER INDUSTRY

*Trademark

ONLY MORSE OFFERS ALL 4: Roller Chain, Silent Chain, Hy-Vo® Drives and "Timing"® Belts

BORG-WARNER SERVES THE AUTOMOTIVE INDUSTRY THROUGH THESE DIVISIONS and SUBSIDIARIES



B-W skill and ingenuity also benefit almost every American every day through many other fields, including:

Aviation — commercial and military aircraft and missiles contain vital B-W parts.

Nucleonics — B-W designed parts are at work in almost every U.S. reactor.

Home — millions of homes use B-W building materials, equipment and appliances.

Farm — 9 out of 10 modern farms use B-W equipped machines.

Oil — every oil field has B-W equipment.

Circle 221 on Inquiry Card, for more Data

BORG & BECK—clutches and torque converters for cars, trucks and tractors; automotive stampings and machined parts.

BORG-WARNER INTERNATIONAL—foreign operations, overseas licensing and export for all Borg-Warner products.

BORG-WARNER, LTD. (England)—automotive timing chains and sprockets, Overdrives and automatic transmissions.

BORG-WARNER (Australia) LTD. — automotive transmission and differential assemblies, gears, gear sets and axle assemblies.

BORG-WARNER SERVICE PARTS—U. S. distribution of automotive service parts.

CALUMET STEEL—special automobile jack bar steel; small angles for auto seats.

FRANKLIN STEEL—spring steel bumper supports; special automobile jack bar steel; small angles for auto seats.

INGERSOLL PRODUCTS—tapered steel discs for truck wheels; automotive stampings.

INGERSOLL STEEL—automotive and tractor clutch discs; carbon electric steel for tractor clutch plates; high carbon and alloy steel sheets; stainless and stainless-clad sheets.

LONG MANUFACTURING—clutches and radiators for cars, trucks, buses and tractors; torque converters; oil coolers; automotive stampings; hydraulic pumps; precision parts.

LONG MANUFACTURING CO., LTD. (Canada)—clutches and radiators for cars, trucks, buses and tractors; oil coolers.

MARBON CHEMICAL—adhesives for bonding rubber and synthetic rubber to metal and other materials; high impact thermoplastic resins.

MARVEL-SCHEBLER PRODUCTS—carburetors for military and industrial equipment and farm tractors; LPG carburetion systems; fuel injection systems.

MECHANICS UNIVERSAL JOINT—universal joints and propeller shafts for cars, trucks, buses, aircraft, tractors, farm machinery, road machinery and mining machinery.

MORSE CHAIN CO.—automotive timing chains and sprockets.

MORSE CHAIN OF CANADA, LTD.—automotive timing chains and sprockets.

ROCKFORD CLUTCH—spring-loaded and over-center clutches for cars, trucks, tractors, road-building, earth-moving and oil field machinery, industrial machinery, agricultural implements, machine tools; power take-off and gear reduction units for gasoline and diesel engines; full power-shifting transmissions for earth-moving and construction equipment.

SPRING DIVISION—torque converter parts and sub-assemblies; sprag type free wheeling clutches; special clutch plates and parts for automatic transmissions; precision flat and Belleville type springs; multislide and punch press stampings, plain and heat treated; special commercial heat treating; small electric motor commutators.

WARNER AUTOMOTIVE—gear boxes; transmission gears; ring gears and pinions; spin-resistant differentials; differential parts and assemblies; splined shafts; power train assemblies; automotive replacement parts.

WARNER GEAR—standard and automatic transmissions; Overdrives; synchronizer assemblies; parking brakes; automotive and aircraft gears; marine and industrial transmissions.

WARNER GEAR CO., LTD. (Canada)—synchronizer units for cars and trucks.

YORK—compressors for automotive air conditioning; refrigeration for trucks.

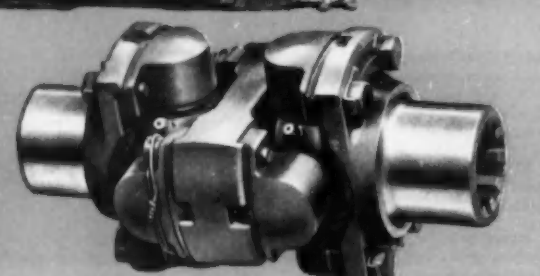
DESIGN IT BETTER ENGINEERING B-W PRODUCTION *MAKE IT BETTER*

BORG-WARNER®

200 SOUTH MICHIGAN AVENUE • CHICAGO 4, ILLINOIS

World's Largest Truck Uses Ten MECHANICS *Roller Bearing* UNIVERSAL JOINTS

Capable of hauling 165 tons of dirt at 35 miles per hour over rough roads, this huge truck stands 45 feet (over four stories) high. Its power transmission train must stand up under hour-after-hour, day-in-and-day-out of gruelling service and deliver hundreds of thousands of miles of trouble-free service. Because the MECHANICS JOINTS used drive through KEYS—instead of bolts—they withstand this type of punishment—that would shear off other types of fasteners.



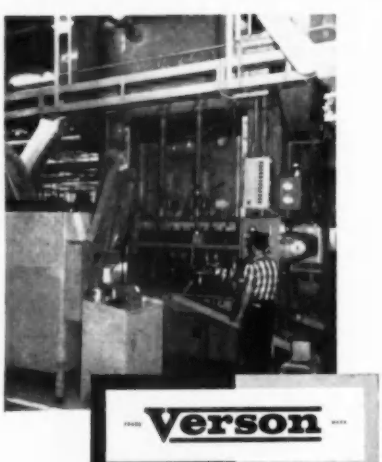
They are designed with less parts and connections for easy assembly and servicing—smooth running balance—maximum strength with less weight—and long, trouble-free, safe operation. Rugged stamina is just one of the advantages you get when you specify MECHANICS JOINTS. Let Mechanics engineers help you design this and other competitive sales features into your product.

MECHANICS
Roller Bearing BW
UNIVERSAL JOINTS

For Cars • Trucks • Tractors • Farm Implements • Road Machinery • Aircraft • Tanks • Busses and Industrial Equipment

MECHANICS UNIVERSAL JOINT DIVISION
Borg-Warner • 2024 Harrison Ave., Rockford, Ill.
Export Sales: Borg-Warner International
36 So. Wabash, Chicago 3, Illinois

Are you "whittling" out metal parts that could be IMPACT MACHINED at a fraction of the cost?



If you manufacture machined parts by cutting away sections of a chunk of steel until only a piece of the required size and shape remains, you may be missing an opportunity to substantially reduce your manufacturing costs.

The opportunity is Impact Machining.

Impact Machining is the practical application of the principles of cold extrusion to the manufacture of a wide variety of piece parts that formerly had to be made by metal removal processes or hot forged. In this process, suitably tooled presses cold flow metal into the required shape with little or no conventional machining . . . little or no scrap.

We urge that you investigate the cost cutting advantages of Impact Machining. Ask to have a Verson Impact Machining specialist go over your requirements with you or, for specific recommendations, send drawings and specifications on parts you must produce.

VERSON ALLSTEEL PRESS CO.

9307 So. Kenwood Avenue, Chicago 19, Ill. • 8300 So. Central Expressway, Dallas, Tex.

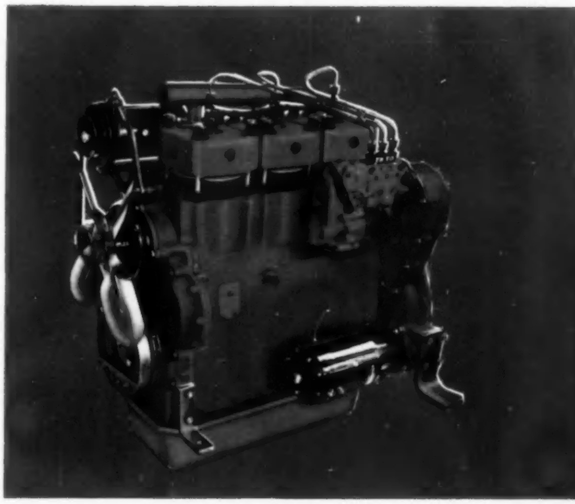
MECHANICAL AND HYDRAULIC PRESSES AND PRESS BRAKES • TRANSMAT PRESSES • TOOLING • DIE CUSHIONS • VERSON-WHEELON HYDRAULIC PRESSES

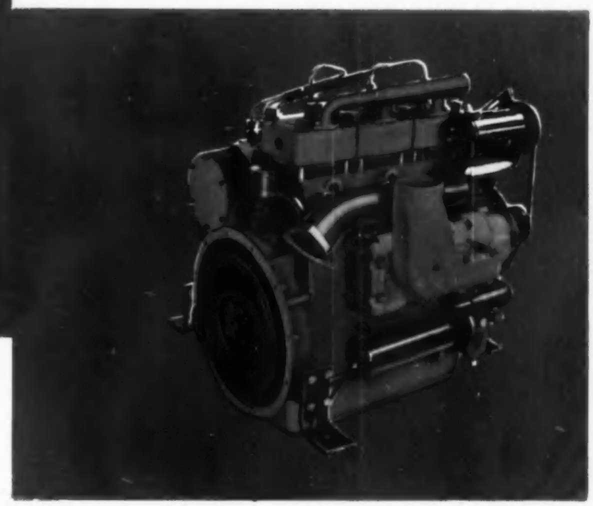
Circle 227 on Inquiry Card, for more Data

Circle 228 on Inquiry Card, for more Data →

Cerlist MODEL 3

85 HP at 3000 RPM





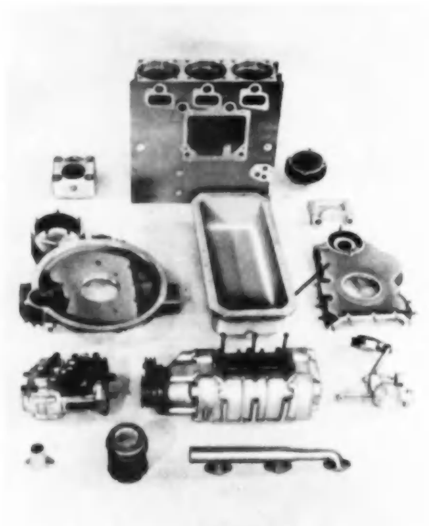
The First of a New Aluminum Diesel Line Featuring:

- ✓ **HIGH SPEED**
- ✓ **LIGHT WEIGHT**
- ✓ **SMALL SIZE**
- ✓ **HIGH OUTPUT**
- ✓ **SIMPLICITY**

For Details, Turn the Page

Cerlist Diesel, INC. BURLINGTON, NORTH CAROLINA

Cerlist Diesel engines are particularly well suited for automotive applications due to their wide speed range (500-3000 RPM) and flat torque curve. Model 3 now makes possible direct installation of adequate diesel power within acceptable weight and dimensional limitations for light trucks, taxicabs, generators, construction equipment, etc. By closely matching the speed range of gasoline engines *Cerlist* Model 3 can in most cases be used with existing transmission ratios.



Aluminum Alloy Components

Use of aluminum alloy for all the component parts shown on the left has resulted in Model 3 achieving the lowest weight of any American made diesel engine in its horsepower range—7.12 lbs. per HP. Now manufactured in the United States, this compact, light-weight diesel engine is the result of eight years of production and field experience with engines of this design in Europe.

Unit cylinder components and other parts are interchangeable for all five models in this family of engines.

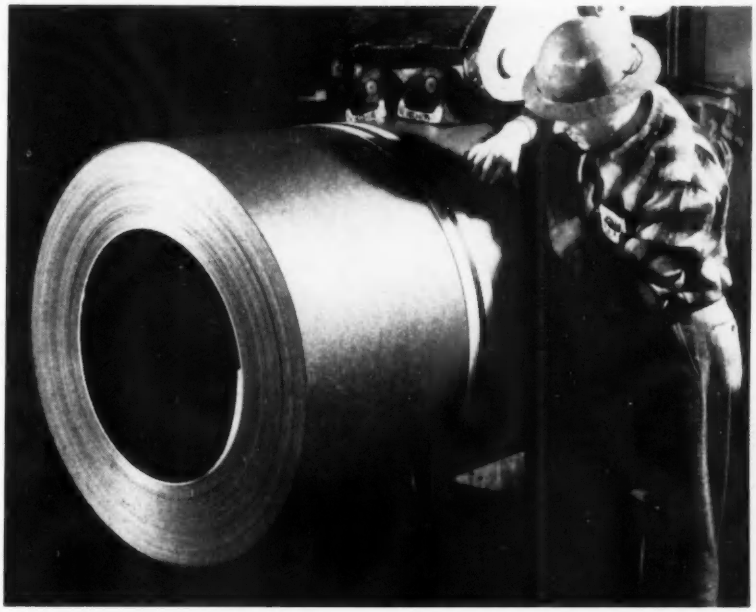
Model 2	530 lbs.	55 HP @ 3000RPM
Model 3	605 lbs.	85 HP @ 3000RPM
Model V-4	770 lbs.	110 HP @ 3000RPM
Model V-6	960 lbs.	170 HP @ 3000RPM
Model V-8	1140 lbs.	225 HP @ 3000RPM

We invite your inquiry

Interchangeable Parts

Cerlist Diesel, INC. BURLINGTON, NORTH CAROLINA

Vinyl Coated Steel Produced by Continuous Mill Process



Vinyl coated steel in coils being inspected after embossing operation at U. S. Steel's Irvin Works. Sheets are available in 18 through 28 gages and in widths from 24 to 52 in., lengths from 30 to 144 in.

A CONTINUOUS mill coating process was developed by United States Steel Corp. for volume production of vinyl coated steel in sheets and coils at the company's Irvin Works, near Pittsburgh. After the sheet is cleaned and electrochemical treated, the next step is to roller coat it with a thin film of thermosetting adhesive and then pass it over another roller to coat the reverse side with a suitable primer. Next the adhesive and reverse surface protection are cured simultaneously in an oven. After liquid vinyl plastisol is applied by a reverse roller and heat cured to produce a permanent bond, the coated sheet while still hot then passes through embossing rolls.

Vinyl coated steel, announced publicly this month for the first time by U. S. Steel, is now available in many textures and can be produced in any specific color with assurance of color uniformity. U. S. Steel officials state that products made of vinyl coated steel are fabricated without damage to the coating on existing customer equipment in essentially the same manner as cold rolled sheet. It retains complete bond and surface texture after drawing or forming operations. The fundamental technical problem was to develop a ductile adhesive which would retain its bond strength after distortion and under a variety of service conditions involving temperature changes and severe humidity conditions.

Already in use for fabricating several commercial products, vinyl coated steel is being tested for applications in cars, trucks and buses. Potential uses are seat back, floor and door panels. It is being considered for a 1960 car instrument panel. Other parts include exterior body panels, hoods and trunk lids.

Data on this new U. S. Steel product are summarized as follows:

VINYL COATING—Liquid vinyl is applied in coatings ranging from 0.008 to 0.020 in. thick. The coating thickness may be specified in increments of 0.001 inch within this range. Color is available as specified. Hardness of the coating ranges from approximately 60 to 90 Shore A Durometer.

STEEL—Steel sheets are available in gages from 18 through 28. Widths range from 24 to 52 in., lengths from 30 to 144 in. It also can be supplied in coils.

TEXTURE EMBOSSING—A maximum depth of 0.005 to 0.006 in. can be supplied.

FABRICATION—Vinyl coated steel sheet can be sheared, slit, punched, lock seamed, stamped, drawn or roll-formed without damage to the coating or change in color. It can easily withstand elongation of 30 per cent.

WELDING—Vinyl coated steel can be welded. Since vinyl itself is an insulator, current flow must be controlled from the back side. Four basic welding techniques have been successfully applied to vinyl coated steel sheets. They are: Graham stud weld, projection weld, capicitator discharge, spring loaded electrode weld, magnetic force weld. In addition, variations of these techniques have produced welds to production standards.

FASTENING—Vinyl coated steel sheet can be fastened in practically as many ways as are used for fastening steel. Included in the methods are: Nut and bolt, sheet metal screws, rivets, lock seam, entrapment, spring clip, steel-to-steel adhesive, vinyl extrusion, vinyl-to-vinyl adhesive, staple, tab, and crimp.

HEAT RESISTANCE—Vinyl coated steel can withstand considerable exposure to heat without loss of color, texture or adhesion. It will stand up under 160 F on a con-

(*Turn to page 326, please*)

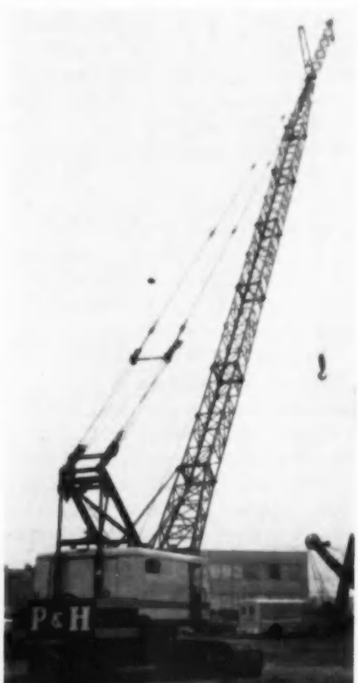
. . . . . Trends in the CONSTRUCTION EQUIPMENT INDUSTRY

By Kenneth Rose

The Model 304 Trojan tractor shovel which will be manufactured at and distributed from Yale & Towne's plants at Batavia, N. Y. and San Leandro, Calif.

New Tractor Shovel

The Trojan Division of Yale & Towne Manufacturing Co. has announced a new tractor shovel, Model 304, with a maximum lifting capacity of 18,000 lb, and rated at 3 cu yd capacity. The machine is powered by a 6-cylinder, 401 cu in. displacement Diesel engine, developing 160 hp at 2500 rpm. A 4-speed transmission with full power shift, a 3-to-1 torque multiplying torque converter, power steering, and 4-wheel power brakes are other features.



New P&H Model 1010 crawler erecting crane

The design affords maximum service accessibility, full 360-degree visibility, and maximum safety for the operator. The front bumper is integral with the frame protecting the tractor shovel. Front lights are recessed. The Trojan safety curve lift arms are below the operator's level even when fully raised. The low load carrying position of the bucket obtained by the 40-degree bucket tipback permits the load to be transported at wheel level, providing maximum stability. Dumping clearance is 11 ft, 8 in. under the hinge pin.

Crawler Crane

Harnischfeger Corp. announced a new crawler erecting crane, its Model 1010, in the 2½-yd excavator class. The crane can lift 100 tons with a 60-ft boom at a radius of 15 ft. The necessary stability is obtained by a crawler assembly 16 ft, 10 in. wide. The excavator can handle a 300-ft boom.

The company has plans for bringing out four or five new excavator models within the next few months, a new line of truck cranes is being readied, and a new group of V-type loop scavenged Diesel engines are to be added to the company's product line.

Sales and Profits at Caterpillar

Caterpillar Tractor Co. reported that its 1958 sales totaled $585,-163,522, third largest in the company's history. Sales in 1957 were $649,904,676. Profit in 1958 was $32,239,831, which was 5.51 cents per dollar of sales, and $3.48 per share of common stock. Profit in 1957 was $40,012,023, which was 6.16 cents per dollar of sales and $4.35 per share of common stock. Starting load costs at two new plants, and strikes in the fourth quarter were held responsible for the lowered profit.

Sales to markets outside the United States were down 18 per cent from 1957. Sales of foreign-made Caterpillar products by the three foreign manufacturing sub-

(*Turn to page* 334, *please*)

Circle 230 on Inquiry Card, for more Data

AIRBRIEFS

By David A. Partridge

Air Freight Tonnage to Surpass Passenger Weight by 1970

"Air freight tonnage will catch and surpass the weight of passengers flown by 1970 when the air lines are equipped with new transports designed primarily as cargo carriers," stated Donald W. Douglas, Jr., in an address to the annual meeting of the Chamber of Commerce of metropolitan St. Louis.

He went on to say that although in 1958 the world's scheduled air lines flew more than one-billion ton-miles, an increase of 400 per cent in 10 years, the air cargo business was still in its infancy. Also, if the cargo carriers are flying transports comparable in performance to the C-133 or a cargo version of the DC-8, it would be possible to reduce their direct operating costs to about four cents per ton-mile by 1965. This would result in a 10 cent ton-mile rate, compared to today's existing 21 cents rate.

This, Douglas commented, would put the air cargo carriers in a better position to compete with surface carriers, although he estimated that their share of total domestic freight moved would not exceed one-half of one per cent by 1965. And that if the 10 cent rate is attained, air freight potential for domestic cargo will be in the area of five-billion ton-miles.

In conclusion, the president of the Douglas Aircraft Co. claimed that due to the high development costs of truly modern air cargo transports, the air lines would have to await the increased volume of production generated by military orders before they could afford to re-equip their fleets. He added, however, that the original cost to the taxpayers would be more than repaid by the efficiency of the new military aircraft, with their greatly decreased operating costs.

Complete Aircraft and Aircraft Engines

Shipments of complete civilian aircraft, as measured by airframe weight, amounted to 1,258,900 lb in December 1958, according to the Bureau of the Census, U. S. Dept. of Commerce and the Federal Aviation Agency. During December 1958, 612 planes valued at $37.7 million were shipped. Unfilled orders for civilian planes of 3000 lb airframe weight and over amounted to 637 at the end of that month, 16 per cent under the backlog of one year ago.

During December 1958, 798 reciprocating type engines valued at $2.9 million and totaling 201,700 hp were shipped.

End of an Era

With the decommissioning of the last operational B-36, the Strategic Air Command became a 100 per cent all-jet long-range striking force. Gone are the ten-engined "giants" of the sky which, since becoming part of the SAC inventory of fighting airplanes in 1948, were credited by many with keeping the "cold war" cold.

Having a range of 10,000 miles while flying above 45,000 ft at over 435 mph, the Convair '36 represented a deadly retaliation factor to potential enemies entertaining thoughts of an attack on the United States. Capable of carrying a tremendous bomb load, the more than 280 combat B-36's then in servise afforded a feeling of security during an age of uneasy peace. The B-36 served its purpose well as the U. S. prepared for the jet and missile age.

Steel Foundries Form Aircraft Castings Association

Chartered under the laws of California, with headquarters in Los Angeles, the Aircraft Castings Association has been formed to promote the use of ferrous castings for the aircraft, missile and related industries.

The association has three general objectives, according to its first president, Allen M. Slichter. These are: to promote and develop an increased acceptance and use of ferrous castings, manufactured from non-expendable patterns, among aircraft, missile and related industries; to achieve and maintain uniform high standards of quality for its products; and to promote increased research and development of ferrous castings for aircraft, missile and related applications.

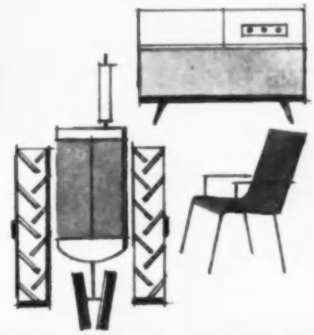
Membership is open to steel foundries producing ferrous castings of aircraft quality, and having the necessary facilities and personnel to advance the objectives of the association.

Esso Unit to Research Super Rocket Fuels

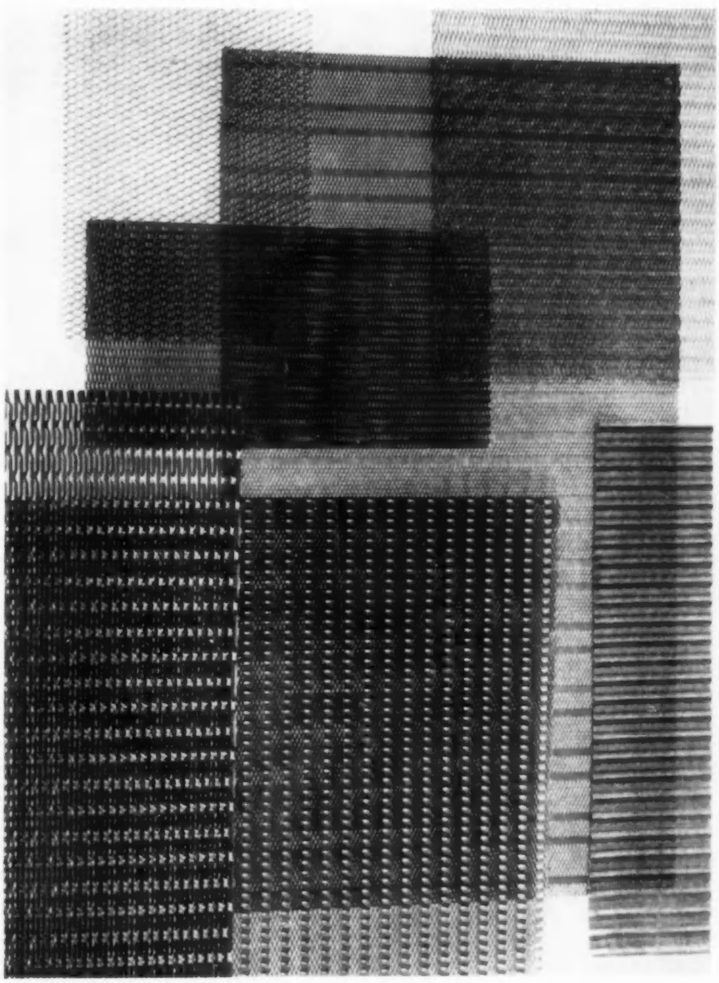
Esso Research and Engineering Co. has formed a new unit to conduct advanced research on super rocket fuels. The work will be carried out under a one-year $1,264,000 contract from the Army Ordnance Corps on a cost, non-profit basis.

The objective is to develop improved solid propellants and will involve both petroleum-based and non-petroleum materials. Director will be Dr. John P. Longwell, who contributed to the development of the Talos missile under a Navy contract held by Esso Research. ■

Inland "job-tailored"
Cold Rolled Sheets work better



product: EXPANDED METAL



problem:

the production of expanded metal panels for a wide variety of products ranging from automobiles to air conditioners, tractors to phonographs, stoves to patio furniture, television receivers and lawn mowers. These to be fabricated from decorator designs in an almost limitless range of complexity. Equipment, created specifically for the purpose, functions at highest efficiency and economy with coil steel which is cut and expanded. The often enormous stretch of quite narrow strands could cause breakage and rejection of the entire piece.

solution:

the problem presented was overcome by "job-tailored" Inland Drawing Quality Aluminum-Killed Steel. The steel not only took punishment of severe expansion and pattern formation, but provided an excellent surface for all subsequent finishing operations.

INLAND STEEL

30 West Monroe Street, Chicago 3, Illinois

Sales Offices: Chicago · Davenport · Detroit · Houston · Indianapolis
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INLAND

Cold Rolled Sheets

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The BUSINESS PULSE

Substantial Gain in Gross National Product for First Quarter. Steel Orders Exceed Output with Operations of Almost 90 Per Cent of Capacity. Improvement in Unemployment Situation Lags.

This Survey, published for the readers of automotive magazines exclusively in AUTOMOTIVE INDUSTRIES, has been prepared by the Guaranty Trust Company of New York

The rate of recovery seems to have slowed down somewhat recently, as has been the case at comparable stages of previous business cycles. The important fact, however, is that business is still improving. Furthermore, available economic data indicate that activity will continue to expand during the foreseeable future.

It now looks as though gross national product for the first quarter will show a substantial gain—perhaps about $10 billion at an annual rate. There are numerous indications that this will be the case. For the ninth consecutive month, the Federal Reserve Board's index of industrial production rose in January and another gain in February seems likely. The Guaranty Trust Company's newly revised index of business activity also is maintaining its advance. Retail sales are benefiting from the rising trend of personal income, and merchants are optimistic about the Easter shopping period. Prices of industrial commodities have shown a steady upward tendency, another good indicator that the business situation is firming.

Steel Orders Rise

Steel activity has advanced at a whirlwind pace. The mushrooming fear of a strike in the industry this summer, added to the revival of general business activity, had by the end of February carried operations to almost 90 per cent of capacity. Even at this impressive rate output was not keeping pace with incoming orders so that backlogs were on the rise. Thus, the outlook is good for continuing vigor through the second quarter. Thereafter, chances seem to favor some letdown in steel activity. Either a strike will occur, which will eliminate output for a time, or there will be a settlement, which will eliminate the sense of urgency in steel ordering. If a strike does not occur, there will be some reason to regret today's hedge buying. Yet, for the individual steel user, it is mandatory insurance. And it will prove to have been in the national interest if there is a strike, for ample inventories in the hands of users then will make possible minimum interruption of nonsteel activities.

Automobile Situation Mixed

Sales of domestically produced cars so far this year have been substantially larger than in 1958. They have not, however, as yet been robust enough to assure achievement of the 5½-million year that industry spokesmen cite as a reasonable hope. An unusual amount of bad weather in many regions of the country and the disruption of Chrysler Corporation's activities by glass shortages may have been factors. With Chrysler's problems now apparently solved and with spring not too far distant, sales statistics may take on strength. One big imponderable in this year's outlook is the growing evidence that all three major manufacturers will introduce small cars later this year. Public awareness of this certainly does not help sales of this year's models of conventional cars.

More Unemployment

Unemployment continues to be the most worrisome aspect of the economic situation. The number of jobless rose by 600,000 between December and January to reach 4.7 million, according to the estimates of the Department of Commerce. This rise was about in line with seasonal expectations. Actually, for the third month running, the seasonally adjusted rate of unemployment held at about six per cent of the labor force. This, many analysts believe, is a surprisingly poor showing, considering the recovery which has occurred in general business activity.

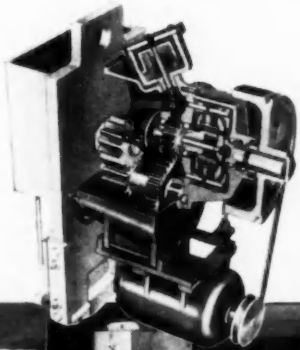
This judgment is not necessarily valid. Improvement in the unemployment situation admittedly has lagged somewhat this winter, but the pattern of recovery in unemployment since the recession low is not drastically out of line with previous experience. The continuing advance of output and trade activity, together with the fact that much of the slack has been removed from the average work week, suggests that pressure is building up for a further reduction in the number of jobless. The spring months should bring definite improvement. If they do not, there will be justification for concern.

Federal Reserve Policy

No evidence of any significant change in Federal Reserve policy appeared during February. Some easing of yields occurred in the money and capital markets, however, as the result of a changing pattern of money flows. The vir-

(*Turn to page* 366, *please*)

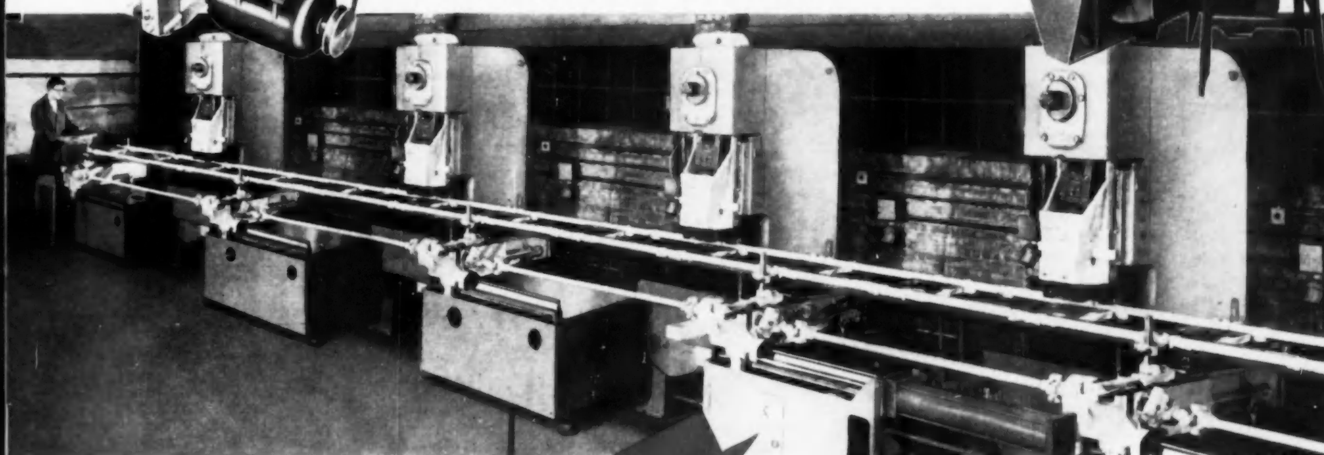
Here's Why Clearing's Torc-Pac O.B.I. Is The Most Practical, Most Versatile Press Available Today



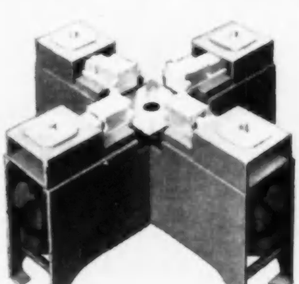
The removable drive and slide unit shown at left contains the most maintenance-free air friction clutch and brake ever built for an O.B.I.

An extra drive unit can be used as a replacement to take care of maintenance of Torc-Pac O.B.I.'s in your shop.

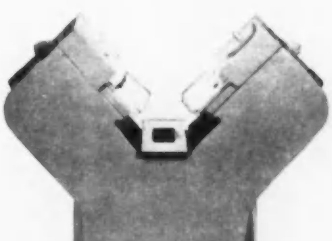
Torc-Pac O.B.I.'s can be used with special Clearing feeds to give you a completely automated stamping line . . .



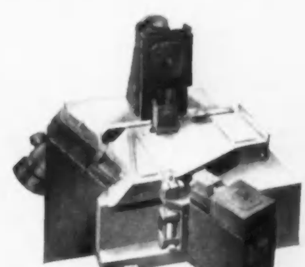
Torc-Pac drive and slide units may be used to develop your own "Power Tooling" by mounting directly to fixtures, or by using easy to build special-purpose frames as shown in the models below.



4 Torc-Pac drives used horizontally in a unit like the above.



2 drive units give you the arrangement above.



3 units give you "Power Tooling" as shown above.

Manufacturers of Presses, Dies, Lathes and Special Equipment for Aircraft and Missile Industry.

Write for specifications and additional facts on Torc-Pac

USI **Clearing** DIVISION OF U.S. INDUSTRIES, INC. 6499 W. 65th Street • Chicago 38, Illinois

Circle 232 on Inquiry Card, for more Data

News of the MACHINERY INDUSTRIES

By Charles A. Weinert

Value of January Machine Tool Orders Was Slightly Over $40 Million Net. Final Figures for 1958 Show Net Orders Totaled $374 Million and Shipments $520 Million

January Orders Maintain Upswing

Machine tool order bookings in January, while not quite as good as December's, indicated a firmness to the upswing which became evident in the 4th quarter of last year.

Net orders in January amounted to $40.15 million total — versus $43.9 million in December. In the January order total, metal-cutting-type machines are valued at $28.1 million, while forming-type accounted for $12.05 million.

For comparison, the net new orders received in January, 1958, totaled $26.85 million—$19.3 million metal-cutting, and $7.55 million forming-type.

With the 1958 figures now final, the order receipts for last year now tally:

Metal Cutting	$281.4	million
Metal Forming	92.9	"
1958 Total	$374.3	"

On shipments—in January the total was $31.8 million, compared to December's $43.95 million. January, 1958 shipments amounted to $57.8 million for both types of machines—reflecting the higher rate of order bookings in 1957 ($642.9 million).

Final figures on 1958 machine tool shipments are:

Metal Cutting	$411.0	million
Metal Forming	108.9	"
1958 Total	$519.9	"

The foregoing statistics, which are still preliminary for January, 1959, were compiled and supplied by the National Machine Tool Builders' Association.

Machine Tool Official Views Foreign Trade

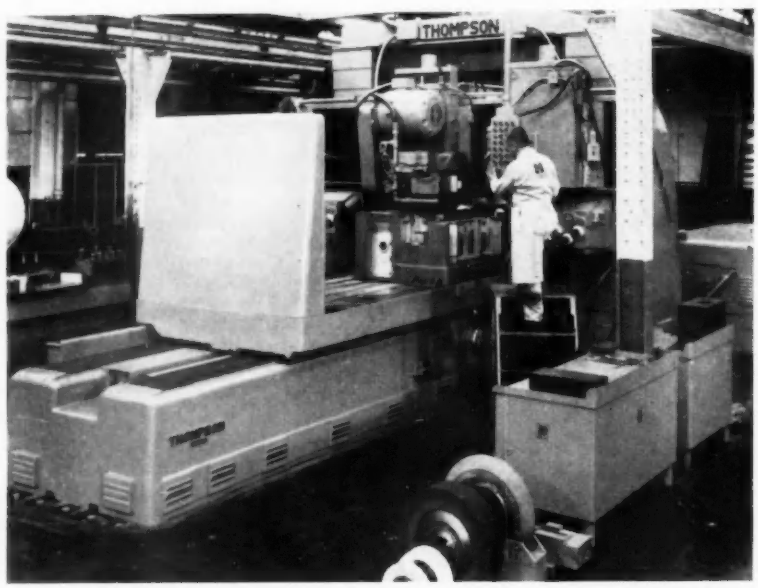
In a strong and aggressive talk, H. Glenn Bixby, president of Ex-Cell-O Corp., recently presented his views on the subject of "Foreign Trade and Its Effect on the Machine Tool and Cutting Tool Industry." The occasion was a meeting of the Association of Cutting Tool Manufacturers, held in Detroit, Mich.

He warned of "complacency," saying "it seems to me . . . this country's sense of supremacy has lulled us to sleep . . . some of us harbor the illusion that there is still safety behind the barriers of tariffs." And that we must "face up to the realities presented by the vibrant forces at work around the world—we cannot remain inflexible in our policies and practices—we cannot fight for the status quo while change is choking us—we should scrap our outmoded adherence to protective tariffs and restrictive measures. . . ."

He added, "We must not think only of the United States as our market, but should broaden our horizons and concepts to encompass the globe. Aggressive research in marketing, innovation in product design and efficient production techniques will enable us to compete in many fields in the expanding world markets,"—"Let's . . . come up with that needed bit of resourcefulness."

In discussing what he thought the future domestic market for machine tools will be, Mr. Bixby said there is a "revolution" in machining and design going on in the automobile industry. Forgings are being replaced with stampings, "an increase in chipless machining can be forecast," and "multiplicity of machining operations will be re-

(*Turn to page* 322, *please*)

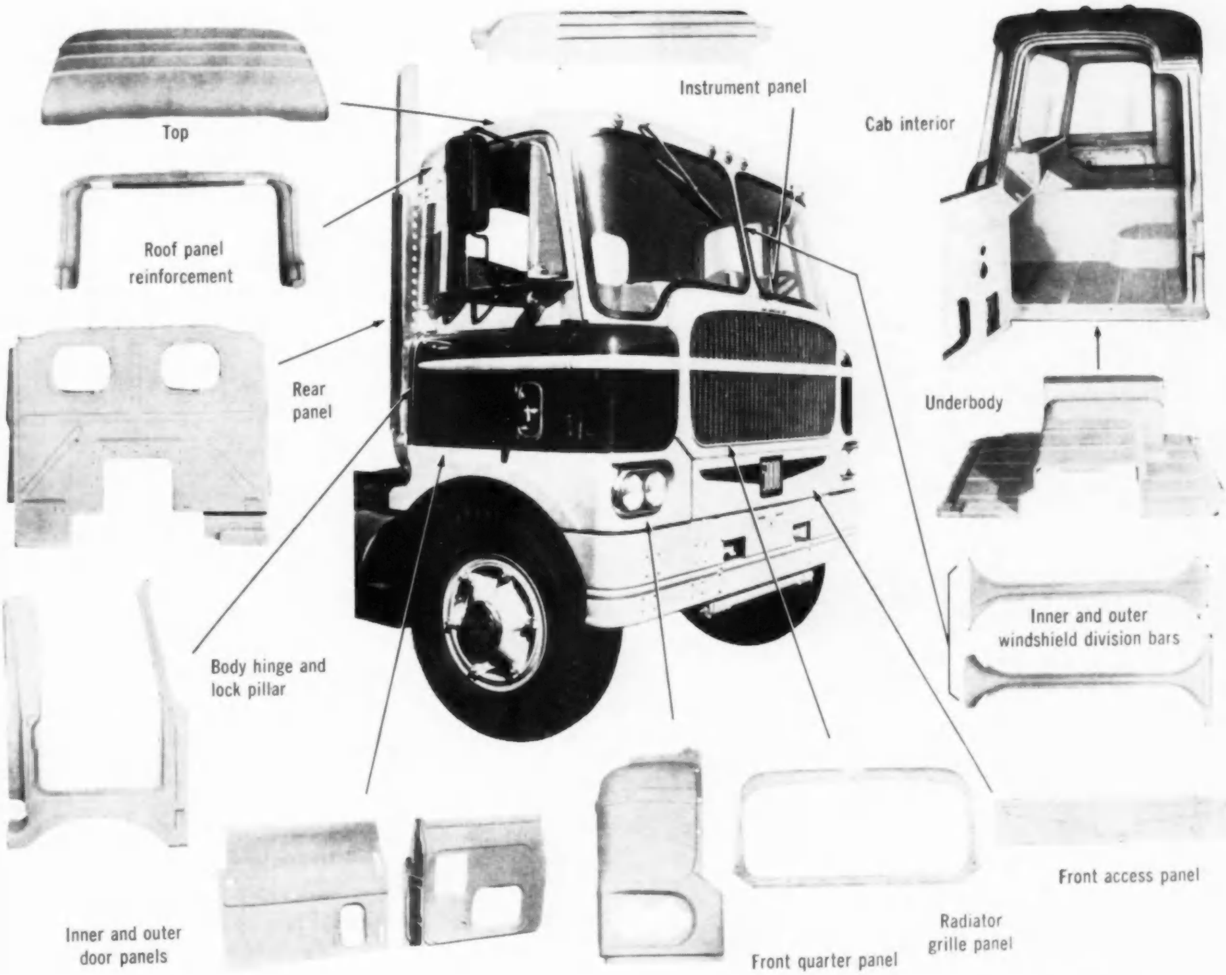


HEALD ADDS 75-TON GRINDER TO PRODUCTION FACILITIES

As part of its continuing equipment modernization program, Heald Machine Co. recently put into operation this large Thompson Hydrail surface grinder. Measuring 30 ft long, 14 ft wide, and 13 ft high, and weighing 75 tons, it mechanizes the grinding of ways, substantially reducing hand-scraping of ways on many Heald machine tools. The machine has three grinding wheel spindles for grinding vertically, horizontally or angularly. Its worktable is 5 by 12 ft in size and moves at speeds up to 100 fpm.

HERE'S HOW MOLDED FIBER GLASS makes the revolutionary new White "5000" cab

Thirty-six MOLDED FIBER GLASS parts are bonded together into an integral unit of radical new design (possible only with MOLDED FIBER GLASS) . . . space-saving, efficient, lightweight, profit-earning.



This MOLDED FIBER GLASS cab is warm in winter, cool in summer, quiet . . . rust-proof, impervious to salt and road chemicals . . . tough, impact-resistant.

Dimensions and weights are as follows:

	Dimensions front to rear	Weight
White "5000" cab	50"	260 lbs.
White "5000" sleeper cab	81"	340 lbs.

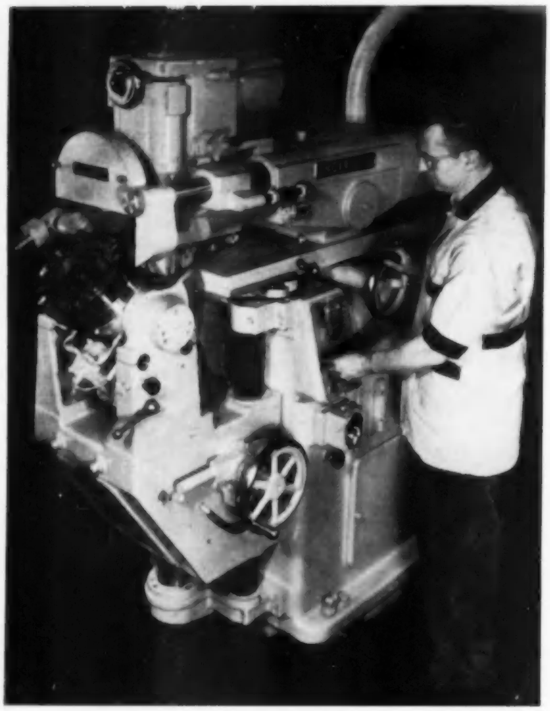
Write or phone today for cost estimates on making *your* products *better* with MOLDED FIBER GLASS, as matched-metal-die-molded by the world's largest, most experienced producers of fiberglass reinforced plastic.

MOLDED FIBER GLASS BODY COMPANY 4611 Benefit Avenue, Ashtabula, Ohio

NEW PRODUCTION and PLANT EQUIPMENT

FOR ADDITIONAL INFORMATION, please use reply card at back of issue

Automatic Cutter Grinder For Increased Production



This Ingersoll automatic cutter grinder will do a complete sharpening job on a wide range of milling cutters since it will grind on the OD as well as face and bevel any cutter within its 4 to 20 in. diameter capacity. It spin-grinds newly filled cutters to size. As the grinding wheel wears, the spindle speed automatically increases so that constant surface speed is maintained. The wheel is automatically dressed with every stroke. Setups are easily and rapidly changed from one size and type of cutter to another. (The Ingersoll Milling Machine Co.)

Circle 30 on postcard for more data

Measuring Instrument

THIS mechanically operated instrument magnifies and permanently records frequency, amplitude, and wave form of vibrations and other mechanical motions.

Designated the Korfund Hand Vibrograph, it is available with both ink and waxed paper recording and a tape take-up reel for storing of readings. It also has a variable tape to simplify readings of high frequency recordings.

The instrument simplifies machinery maintenance scheduling, since it provides a permanent record of the vibration amplitude at the time of installation. Comparing the vibration readings on tapes taken at regular intervals, with this original tape, establishes the amount of wear in bearings or cutting tools, indicating when replacement will be necessary, before breakdown.

Korfund Hand Vibrograph

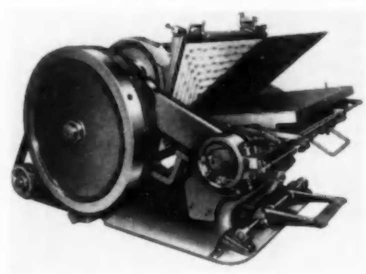
It can also be used to measure rpm of rotating equipment, where shafts or rotors are not accessible, by simply placing its probe against the machine housing. *The Korfund Co.*

Circle 31 on postcard for more data

Cutting-Creasing Press

THIS 28 by 41 DM (double micrometer) cutting and creasing press has a die-cutting load of 80 tons.

The double micrometer design allows for impression adjustment in



thousandths of an inch on either one or both sides of the press as required depending on press wear overtime. The press is also equipped with a hinged cutting plate so that make-ready corrections can be made without removing the plate from the press. *Thomson-National Press Co.*

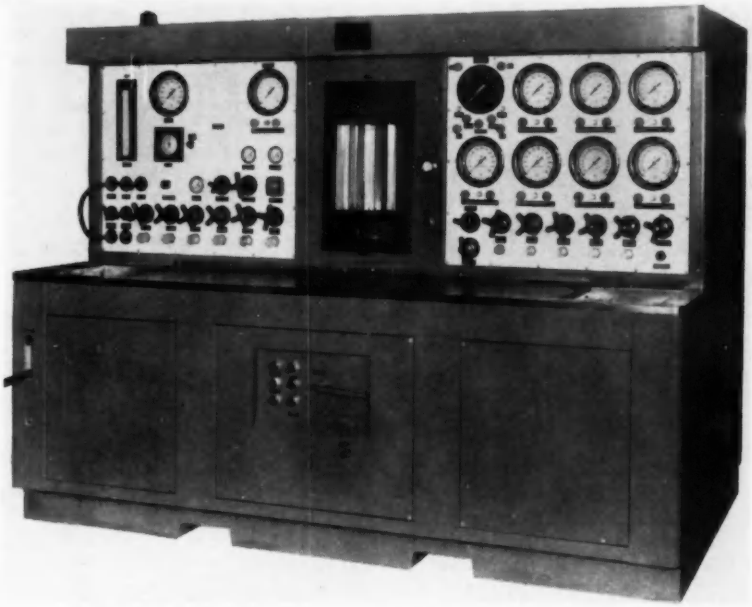
Circle 32 on postcard for more data

Lapping Machine

THE Footburt-Schraner Model SF is a manually loaded machine for lapping or roll burnishing bearing surfaces on straight shafts, crankshafts, or camshafts, or for fillet rolling stress-concentration points in shafts.

It will handle any shaft up to 36 in. long, and up to 5 in. stroke. Any shaft with bearing surfaces ½ in. wide or more and with at least 1¾ in. between centers of bearing surfaces can be accommodated. *The Foote-Burt Co.*

Circle 33 on postcard for more data



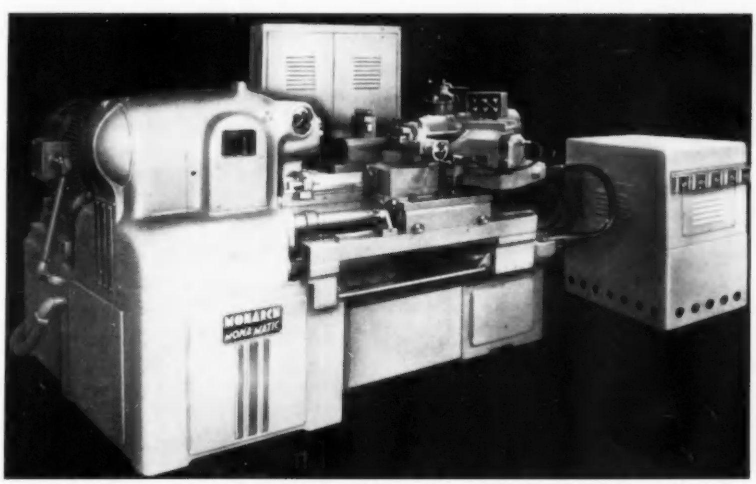
Nankervis missile components test console features pressures to 20,000 psi

Test Console Features Pressures To 20,000 PSI

MODEL 9500 hydraulic components test console is designed for testing and analyzing hydraulic missile components under simulated operating conditions.

It is a self-contained laboratory type instrument for static and dynamic testing of hydraulic missile components. The automatically regulated high-pressure oil system delivers up to 20 gpm at 3000 psi or 9.7 gpm at 5000 psi. A manually-operated high-pressure source produces 20,000 psi for static testing. *George L. Nankervis Co.*

Circle 34 on postcard for more data



Monarch Model 20-H Mona-Matic automatic double carriage turning machine

Automatic Double Carriage Turning Machine

DESIGNATED as the Model 20-H Mona-Matic, this machine is a fully automatic double carriage turning machine, with a 60 degree "air gage tracer" controlled front tool slide. A variety of automatic cycling arrangements provides high productiveness and versatility.

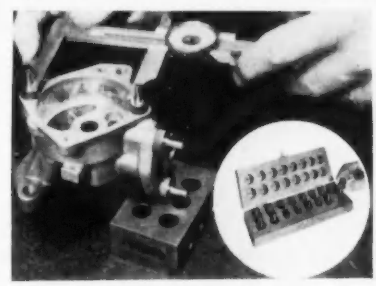
It is available in 18, 30 and 42 in. center distance. Swing over bed is 15 in.; over front slide and rear slide ways, 8 in. Bed ways are flame hardened and ground. Eight spindle speeds are available by pick-off gears in each of three standard ranges. The tailstock has an air actuated spindle and inbuilt, heavy-duty, anti-friction center. Feed rates are variable from 1 to 40 ipm; carriage traverse is 200 ipm. *The Monarch Machine Tool Co.*

Circle 35 on postcard for more data

Plug Gage

THESE plug gages are designed for fast, simple set-up and inspection of hole center distances in aircraft, missile and other high precision parts.

Called Jo-plugs, the gages consist of plain or threaded plug bases and upper spindles called Jo-spindles. Jo-spindles act as constants throughout



Spence Jo-plugs for fast hole inspection

the entire range of plug sizes and are a uniform 0.200 in diameter.

To check center distances, proper size Jo-plugs are screwed or set into the holes, allowing the spindles to act as reference measuring points. The checker then has only to measure the distance between the spindles, and add the constant to obtain the distance between centers within a tolerance of ± 0.00015. *Spence Industries.*

Circle 36 on postcard for more data

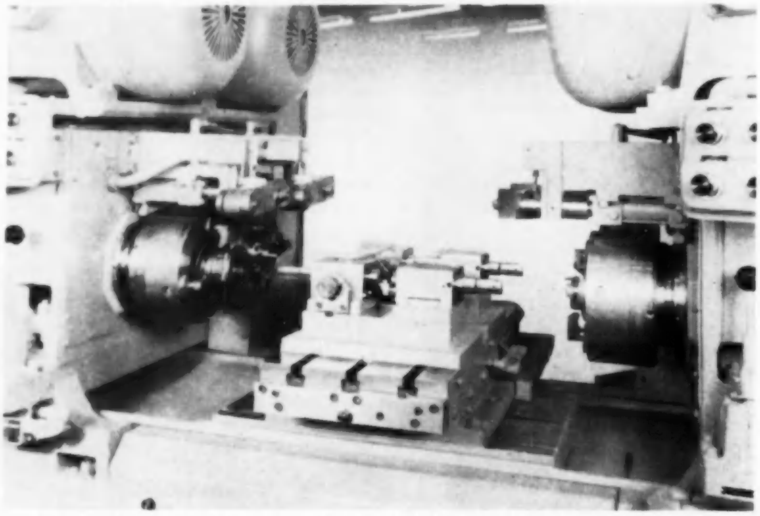
Dual Cable Reel

UNITED Specialties has designed a dual cable reel for both electrode and ground cable. Each of the twin reels has a capacity of 50 ft of 2/0 cable or shorter lengths of 3/0 or 4/0 cable. Current capacity is 300 amps with 60 percent overload factor for intermittent operation.

Designed for both portable and fixed installations, the Model EA-10 Weldreel is of open tubular construction. It has a heavy-duty retracting spring and locking pawl device. *United Specialties, Inc.*

Circle 37 on postcard for more data

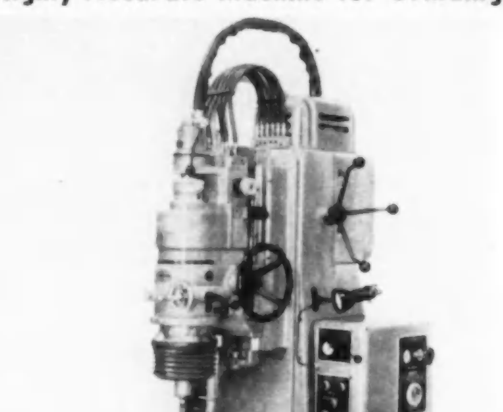
Boring Unit With Unique Locating-Clamping Device



This machine, equipped with two standard Ex-Cell-O precision spindles at each end, permits machining at one end while clamping at the other. Holding close limits on diameters and concentricity, production is 180 parts per hour. The part is an automobile universal joint ball and bushing assembly. (Ex-Cell-O Corp.)

Circle 38 on postcard for more data

Highly Accurate Machine for Grinding Missile Tools



Moore No. 3 jig grinder for use in the finish grinding of tools for missile applications. The machine conforms to JIC standards and provides for micro setting of the vernier dial.

Fine tolerances in the finish-grinding of tools for missile applications are possible with this No. 3 Moore Jig Grinder.

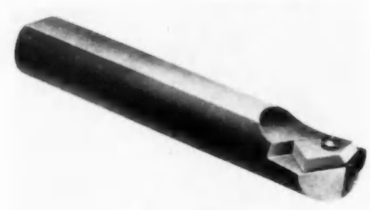
The machine is said to grind, with split-tenth accuracy, straight or tapered holes and regular or irregular contours to size and location after hardening. It also provides this same efficiency for slot-grinding and chop grinding operations. Spindle speeds are from 40 to 250 rpm.

Major features of the machine include: hardened, ground and hand-lapped steel ways, which eliminate gibs and overhang; table work surface of 11 by 24 in. with 18 in. height allowance; and quick setting precision lead screws. *Moore Special Tool Co.*

Circle 39 on postcard for more data

Standard Boring Bars

Two styles of standard nonadjustable boring bars (AS and AT) using throw-away carbide inserts are designed for operations not requiring microadjustment of diameter and are



Wesson standard boring bars

available with either a negative or positive 5 degree rake. Both styles are available in either hand and clamps can be either steel or carbide.

Style AS boring tools are used with square carbide throw-away inserts for straight boring. Style AT tools are used with triangular inserts for boring and facing operations. All nonadjustable boring tools have carbide anvils and are available in standard sizes from 1-¾ to 3 in. *Wesson Co.*

Circle 40 on postcard for more data

Air Conditioner Units

Two completely packaged air conditioning units rated at 40 and 50 tons cooling capacity, have been introduced by Westinghouse. These single-compressor units are for commercial and industrial applications and are available in ten models rated from 3 to 50 tons.

The units use separate fan sections for vertical or overhung mounting with multiple fan discharges to fit any desired application. Both models are 36 in. wide and are completely enclosed with flush panels bonderize-finished in charcoal grey. *Westinghouse Electric Corp.*

Circle 41 on postcard for more data

BURTON ENGINEERING: Keyed to the ever-changing needs of the industry—combines the time-tested advantages of steel springs with newest developments in their design and manufacture for top performance.

LEADING TRUCK MANUFACTURERS . . . Mack, White, Dodge, Diamond T, Trailmobile, Lufkin, Dart, Nabors, Autocar and others . . . have long specified Burton Leaf or Coil Springs as original equipment.

PRODUCTION FACILITIES—Burton Springs are produced under the most rigid standards of quality, utilizing modern equipment and scientifically controlled methods.

QUALITY AND DEPENDABILITY . . . proven in actual service . . . proven under the toughest conditions of high speed, rough roads and heavy loading.

BURTON AUTO SPRING CORP.
. . . *Vital Support for the Automotive Industry* . . .

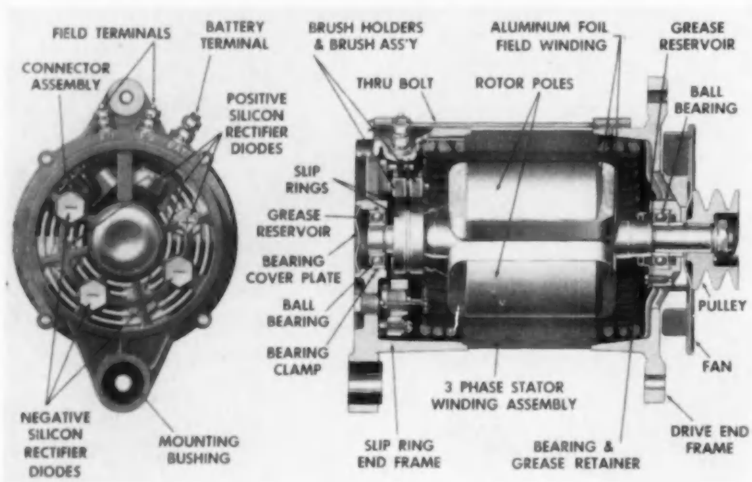
WESTERN AVENUE AT FORTY-EIGHTH STREET • CHICAGO 32, ILLINOIS

 Circle 234 on Inquiry Card, for more Data

NEW PRODUCTS
AUTOMOTIVE-AVIATION

FOR ADDITIONAL INFORMATION, please use reply card at back of this issue.

Alternating Current Electrical Generator



This alternating current electrical generator for passenger cars has the ability to deliver increased power requirements, even at low driving speeds.

The system will deliver 26 amps of electrical current at engine idle and up to 60 amps at higher speeds. This means that even in slow-moving city traffic the a-c unit, in addition to furnishing the normal electrical requirements of ignition and lighting systems, will produce sufficient power to operate air-conditioning, ventilating fan, radio and other power-operated accessories without serious drain of the operating power of the battery.

The generator is a compact 31 lb unit and measures 5.75 in. in diameter. It is designed to use the same mounting lug spacing as present standard 12-v d-c generators.

Built into the frame of the generator, the six silicon diodes that provide the self-rectifying feature of the unit, eliminate the need for external rectifiers with additional wiring. Thus the unit can be easily installed with a minimum of change in the standard d-c electrical system. *Delco-Remy Div. of General Motors Corp.*

Circle 60 on postcard for more data

Industrial Power Units

Ford's industrial Engine Dept. has introduced four power units to supplement the gasoline and Diesel industrial engines and power unit line.

The units include modern industrial engines fully adapted with sheet metal housing and instrument panel, electrical system, radiator assembly, skid-type mounting and other components which make the unit ready for its industrial job.

They are built around Ford's 330 cu-in. six-cylinder Diesel engine and the three new Super Duty gasoline engines of 401, 477, and 534 cu-in. displacement. *Ford Div. of Ford Motor Co.*

Circle 61 on postcard for more data

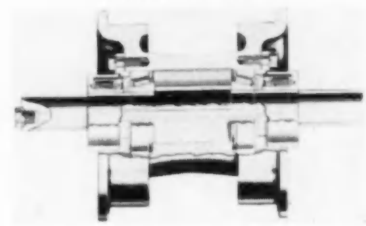
Stripper Additive

An additive, designed to enable alkaline paint stripping solutions to remove difficult synthetic finishes, has been developed by Oakite Products, Inc.

Known as Oakite Stripper Additive No. 4, it is a solvent. It converts a narrow-range stripping solution into a wide-range solution capable of removing epoxy, acrylic, and similar tough finishes. The material is added to alkaline solutions in the range of 10 to 20 per cent by volume.

Circle 62 on postcard for more data

Truck Wheels

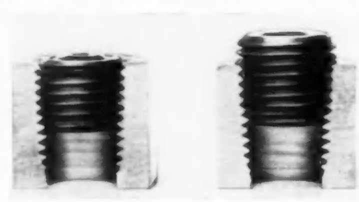


Greasing by the user is no longer necessary on Positive Seal truck wheels, front idlers, and support rollers for an entire crawler tractor line. Shown is a cross-section of the Allis-Chalmers Positive Seal truck wheel that is lubricated at assembly and needs no further greasing during its operation. (Allis-Chalmers Mfg. Co.)

Circle 63 on postcard for more data

Flush-Seating Plug

Flush-seating pressure plugs are now being offered by the Standard Pressed Steel Co. When installed in hydraulic, pneumatic or other fluid pressure systems, the hex socket plugs are said to seat virtually level with



the material into which they are threaded. The socket plugs are available in a full range of standard sizes from 1/16 to 1¼ in. Material is alloy steel, heat treated for added strength.

Circle 64 on postcard for more data

High Pressure Hose

Super-Spiral high pressure hose is designed for use in equipment utilizing high operating pressures. The hose is available in both 4-ply and 6-ply all-spiral wound wire reinforced styles and in sizes from 3/16 to 1½ in. ID.

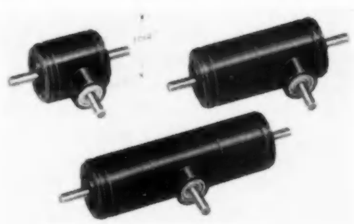
The maximum working pressures range from 10,000 psi for the 4-ply and 12, 500 psi for the 6-ply in the 3/16 in. ID size to 2500 psi for the 4-ply and 3000 psi for the 6-ply in the 1½ in. ID size.

The inner tube is made of oil-resisant neoprene compound, reinforced by an open textile braid. Either 4 or 6 plies of spirally wrapped heavy wire reinforcement form the body of the hose with an oil and weather resistant synthetic rubber outer cover. *Anchor Coupling Co.*

Circle 65 on postcard for more data

Angles and T-Drives

Metron angle and T-drives, Series 12, are for use where power must be transmitted at right angles in cramped spaces. The 1 to 1 ratio units may be combined with miniature speed reducers or between two or more speed reducers, thus permitting take-



offs with different speed reductions.

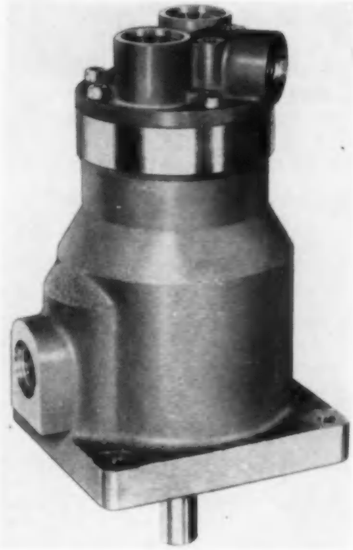
The drives handle up to 24 oz-in. of torque, speeds to 10,000 rpm can be reached without excessive wear. Maximum power transmitted is 0.025 hp. *Metron Instrument Co.*

Circle 66 on postcard for more data

Hydraulic Motor

Designed primarily for use as a hydraulic motor to drive a fuel booster pump, this unit can be used as a pump in a closed hydraulic circuit. The overall efficiency remains the same whether the unit is operated as a pump or motor.

With a 7.3 gpm flow, the hydraulic motor develops 11 hp at 4400 rpm with a 3000 psi differential and is operable in fluid temperatures from —65 to 450 F. It is fabricated from



high temperature stainless steel throughout. *Lear-Romec Div., Lear, Inc.*

Circle 67 on postcard for more data

Tachometer Generator

General Electric has developed a miniature tachometer generator to replace its previous line for jet aircraft. The two-pole, three-phase unit represents a substantial weight reduction along with a comparable size decrease. It is rated for continuous operation at 350 F and is directly interchangeable with the previous larger model. *General Electric Co.*

Circle 68 on postcard for more data

Liquid Resin

A Maraset epoxy resin system for casting, laminating, and adhesive uses where high heat resistance is required has been developed by the Marblette Corp.

The multi-functional liquid resin comes in two formulations. Resin 617-A is aluminum filled, while resin 617-C is clear. Both have low viscosity, which can be maintained at room temperature for as long as 30 minutes after mixture with a Marblette hardener.

In both forms, resin 617 has heat resistance up to operating temperatures as high as 500 F. Its heat distortion point is 425 F. Its maximum deformation is 0.01 in/in., and is partially recoverable.

Circle 69 on postcard for more data

Solder Alloy

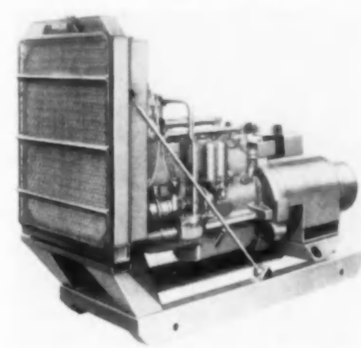
Ambraze 4300 is for high capillary joining of steel, nickel, stainless steel, copper, monel, aluminium bronze, beryllium copper, elkonite and aluminum or any combination of these metals. The finished joint can be chrome plated.

It offers excellent corrosion resistance, is non-toxic, ideal for thin gage dissimilar metals and can be used with a torch or soldering iron. It has a melting point of 425 F, tensile strength of 14,000 psi, shear strength of 11,200 psi and is available in 1/16, 3/32 and ⅛ in. one lb spools. *American Brazing Alloys Co.*

Circle 70 on postcard for more data

Electric Plants

Designed to meet the needs of heavy stand-by power requirements, the Kohler Model 75R81 is a 75 kw,



120/208 volt a-c electric plant equipped for remote starting.

The 6-cylinder engine develops 200 hp at 1800 rpm. Standard equipment includes vibro dampers, low oil pressure and high water temperature safety devices, anti-dieseling device for remote starting models, dual type oil filters, oil pressure gage, muffler and oil bath cleaner. *Kohler Co.*

Circle 71 on postcard for more data

Steel Shelving

Called Penco service-truck shelving, a line of steel shelving for installation inside panel trucks is available from Penco Div., Alan Wood Steel Co.

Made of heavy gage steel, the shelving utilizes previously wasted space over the truck's rear wheel wells to provide low-cost, compartmentalized storage for such items as tools, spare parts, supplies and equipment.

Circle 72 on postcard for more data

Advances in Lubricating Oils and Fluids

By Joseph Geschelin

API Lubrication Committee Discusses Problems of Refiners in Meeting Needs of Changing Engines and Transmissions

ANNUAL renewal of the battle of the giants — the American Petroleum Institute Lubrication Committee meeting held in Detroit in February—found the motor vehicle industry and the petroleum industry once more locking horns on the subject of motor oils and automatic transmission fluid (ATF). Although these meetings invariably bristle with controversy, the focus of objectives is the same and the cooperative action of both groups always results in satisfactory compromises. Best evidence of this is the fact that year by year the petroleum industry comes up with fuels and lubricants that take care of the growing crop of new generation vehicles.

Motor Oil Identification

This meeting as usual had plenty of fireworks. In introducing the session on motor oils, Dr. Lloyd Withrow of General Motors Research observed that the identification of motor oils has become so complicated that even motor car people are confused. The list of motor lubes by service types has grown to six and the objective of the meeting was to take but one classification—MS—to seek agreement as to what it is and where and when it should be used. If this could not be done with a single classification then industry people would prefer to go back to the simple classifications in vogue some 10 years ago.

Dr. Oscar C. Bridgeman of Phillips Petroleum, spokesman for the refiners, felt that Service MS was clearly stated in the API definition. He presented at length the problems of refiners and producers of additives in meeting the special needs of changing engine requirements, commented that current trends result in severity of service to such an extent that any future design changes necessarily affect lubrication requirements in some degree, either favorably or adversely.

Oil-Drain Intervals

Furthermore, Bridgeman emphasized one of the major points of disagreement between the petroleum industry and motor vehicle designers, namely that API insists that regardless of lubrication specifications motor vehicle users must drain oil at 1000-mile intervals in warm weather, at 500-mile intervals in cold weather. The vehicle people have never accepted these recommendations.

In the cooperative work between the two groups there is agreement that engine designers are to advise their petroleum counterparts as to lubrication requirements for new engines. Bridgeman observed that even though such reports are made available on time there is a long lead time at the refineries before such changes can be made in packaged oil delivered at the service stations. Hence, there is always a lag in making new lubricants available to the public. It is obvious, in fact, that new models have to operate on existing motor oils regardless of altered requirements until the refineries can catch up.

Finally he mentioned that the high performance engines of today with their cooler operation are encouraging a return to cold sludging problems experienced many years ago.

Shortcomings of Some Oils

In rebuttal, Victor G. Raviolo, Ford Motor Co., referred to his discussion before the Lubrication Committee several years ago in which he stated that Ford experience indicates that many oils designated for service MS fall far short of giving the performance expected in accordance with the definition in the SAE Handbook. He still feels that these same shortcomings exist. Raviolo concluded that motor oils now can be marked MS even though they do not meet acceptable service standards.

He said further that this situation cannot be permitted to continue, and that failure to clarify the matter by cooperative action might force manufacturers to seek other alternatives. One of these might be the testing of oils by published procedures and issuing lists of approved oils.

According to Raviolo the industry wants to be able to tell its customers what to buy in simple and understandable terms. And the oils thus designated must meet the specification requirements.

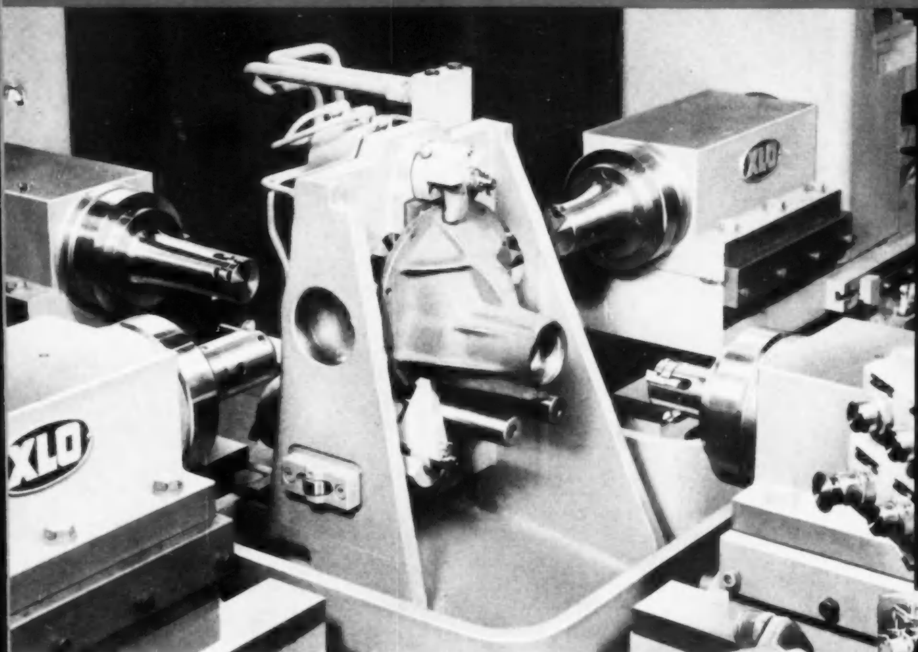
Further Changes in ATF

The petroleum industry has become worried about the possibility of further changes in requirements for automatic transmission fluids incident to the proposed new specification which was presented at the SAE Annual Meeting by Norman Hunstad of GMR. One of the petroleum men characterized it as too idealized and predicted that the customer would have to pay from 15¢ to 50¢ per quart more if such oils were made available without compromise.

Because so much of the discussion dealt with controversial matters, the chairman of this session requested the press to refrain from comment and consider it a closed meeting. In view of this we shall confine our report to some general conclusions. Although the oil companies report that complaints from the field have been negligible, an industry spokesman indicated that the volume of automatic transmission rebuilding has grown to proportions approaching engine rebuilding. That's big business in the automotive service field.

(*Turn to page* 342, *please*)

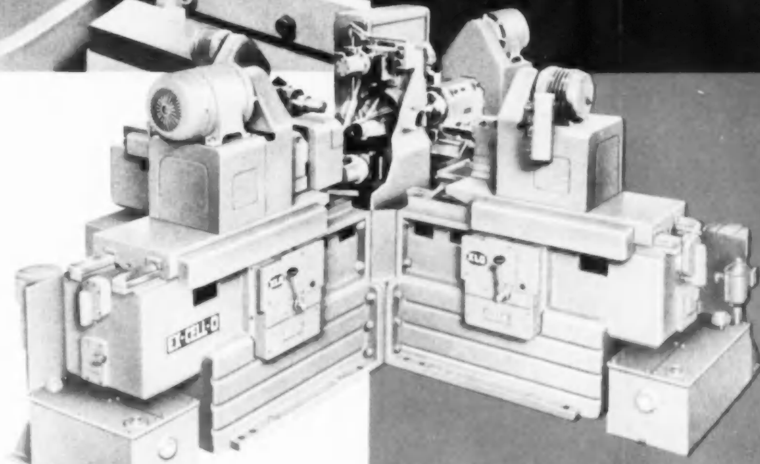
3 MORE COST-CUTTING IDEAS



Close-up of 4-way machine shows Ex-Cell-O Precision Spindles used to assure accurate boring of pinion bearings and cross-holes in an automotive differential housing.

Below: Working simultaneously from four directions, this Ex-Cell-O Way-type Machine is made up of four standard units joined with a standard center section for precision location of the workpiece and precise 90° relationship between spindles.

58-31C



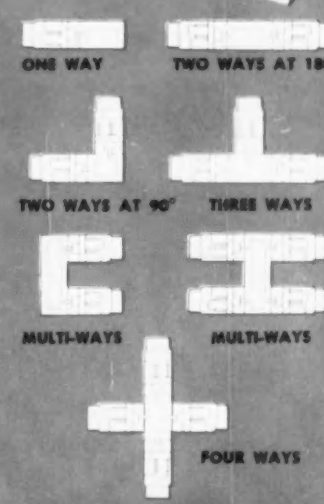
Operations Combined to Boost Profits

4-Way Precision Boring Machine works simultaneously from 4 directions for fast, accurate production

The differential carrier assembly above is typical of parts machined quickly, easily and economically on Ex-Cell-O Way-type Machines. On this particular job, bore relationship is maintained at a true 90° and bore diameters are held as close as .0005".

Ex-Cell-O Way-type Machines consist of standard units combined into a single machine with a standard center section for precise, simplified parts location. They can be used singly or utilized in fully automated lines.

If your production plans—present or future—demand utmost accuracy with high output, look into the many advantages of Ex-Cell-O Way Machines by calling your local Ex-Cell-O Representative today or, if you prefer, by writing direct.



Standard Ex-Cell-O Way units can be combined in these combinations for precision boring, turning, facing, grooving and chamfering.

Suppliers Play Major Role In Expansion Of General Aviation

PART II

By David A. Partridge

IN Part I of this two-part article which appeared in the December 1 issue of AUTOMOTIVE INDUSTRIES, the author discussed the growth and potential of the general aviation industry. Part II is devoted to industry suppliers serving general aviation—present problems and future outlook.

An indication of the importance of suppliers to general aviation can be gained by considering typical requirements of light aircraft builders for a year's operation. For example, the "big three" of general aviation—Piper, Beech and Cessna, spent, during 1957, $13.9 million for power plants, $3.6 million for flight instruments and navigational aids (two companies reporting), and $6.0 million for aluminum—a total of $23.5 million spent for three basic items in one year. These figures pertain to only three out of an approximate 20 light aircraft builders.

General aviation offers a highly favorable market to many companies producing products ranging from power plants to tail wheels. To meet these needs, suppliers have had to expand in all areas of production.

Requirements placed upon its suppliers by general aviation are so varied and specialized in nature that no one company or group of companies could hope to provide all the items necessary.

Who then, are the companies concerned?

In a sense, any wholesale hardware dealer or small job-shop could be considered as a supplier or, at least, a potential supplier. From sources such as these, aircraft builders may draw hundreds of products. However, this discussion is limited to those companies that are members of the Aircraft Distributors and Manufacturers Association (ADMA).

ADMA is a national organization devoted to representing the distributor and manufacturer of aviation parts, supplies and equipment in all matters of National importance, assisting in making the public in general and industry at large aware of the advantages and usefulness of the airplane and to bring about the utmost efficiencies and economies in the distribution of aviation supplies and equipment.

Each manufacturing member of the ADMA (see accompanying table) was contacted and asked questions such as the following: What is your investment in production facilities? How much plant floor space do you allot to making general aviation products? How many people are engaged in producing these products? (Several recent additions to the ADMA were not included in this survey due to editorial deadlines.)

Rather than base the survey on output or production data, it appeared to the author that an examination of the requirements of the industry or the expenditures necessary to produce aviation products in volume would serve to indicate its size.

Findings are not directly linked with individual companies but when considered on an aggregate basis or as a representation of the industry as a whole they will serve to show that general aviation's supplier industry is big business. And, like the industry it serves, provides a sizeable contribution to our National economy.

Manufacturing

For example, during 1957 the number of people employed by just 19 out of the many companies involved totaled over 26,000. Most are highly trained, skilled specialists, who have grown up with the industry. The average weekly wage for nonsupervisory or production personnel in the aircraft parts and equipment industry for the first 11 months of 1958 equalled $101.49 for an average working week of 40.6 hours.

For a long time general aviation aircraft were practically handmade. Parts and equipment had to be fabricated for the most part by the builders themselves. Most of the operations of the companies that were supplying aviation products were of a similar nature simply because it was not economical to set up a large production process for a relatively small market. There was not enough demand—not so today. One group of suppliers reported machine-tool and production equipment inventories valued in excess of $7.4 million—all devoted to producing hundreds of different parts, supplies and equipment for consumption by light aircraft builders.

Another area of the production picture that provides a trend concerning the size of any industry is the amount of plant and production floor space provided. Suppliers have, in many cases, launched large expansion programs to increase space and during 1957, a representative group of about 20 companies allotted over 1,775,000 sq ft to light aircraft products.

Distribution

General aviation is responsible for yet another branch of America's economic growth. Namely, the aviation parts distributor. Distributors of aircraft products provide an invaluable service to both the manufacturer and consumer alike.

They cover the country with salesmen, inventories and convenient locations. During a recent survey 28 distributors had 89 warehouses in 64 cities. Total sales of 33 of them were at the rate of $62,903,000 per year. Value of inventories reported by 29 distributors totaled over $13,675,277 dollars and warehouse space for customers and suppliers equalled 543,320 sq-ft—an average of 7056 sq-ft per location. These distributors carried the products of 69 manufacturers.

(Turn to page 334, please)

More Government Contract Awards

LATEST contracts awarded by various Government agencies, and covering primarily automotive and aviation products, are listed in the following. Typical of the items contained in these monthly listings are: passenger cars, motor trucks, aircraft, military tanks, engines, transmissions, other components, spare parts, plant equipment, etc. This list is for the period February 1 to February 20, inclusive.

AEROJET GENERAL CORP., Sacramento, Calif.
Rocket motors, 2343 ea—$1,909,654

APEX MACHINE & TOOL CO., Dayton, Ohio
Spare parts, various aircraft—$56,000

BELLER WHEEL, BRAKE & SUPPLY CO., INC., Memphis, Tenn.
Wheel, automotive disc type—$34,712

BENDIX AVIATION CORP., BENDIX PRODUCTS DIV., South Bend, Ind.
Spare parts, aircraft—$139,716

BEWLEY ENGINEERING CORP., Southport, Conn.
Spare parts, various aircraft—$46,795

CARLISLE TIRE & RUBBER DIV., CARLISLE CORP., Carlisle, Pa.
Aircraft, tires and tubes—$35,661

CHRYSLER MOTORS CORP., Washington, D. C.
Sedans, 13 ea—$24,537

CLEVELAND PNEUMATIC TOOL CO., DIV. OF CLEVELAND PNEUMATIC INDUSTRIES INC., Cleveland, Ohio
Spare parts, various aircraft—$160,292

COOPER TIRE & RUBBER CO., Findlay, Ohio
Tire, 2,475 ea—$27,967

CURTISS - WRIGHT CORP., SOUTH BEND DIV., South Bend, Ind.
Trucks, van expansible—$303,214

DOUGLAS AIRCRAFT CO., INC., Charlotte, N. C.
NIKE spare parts & components—$112,-360

FIRESTONE TIRE & RUBBER CO., Akron, Ohio
Aircraft, tires and tubes—$1,169,670

GATES RUBBER CO., SALES DIV., INC., Denver, Colo.
Tire, 1600 ea—$58,912

GENERAL MOTORS CORP., CHEV. MOTOR DIV., Detroit, Mich.
Truck, chassis—$47,870

GENERAL MOTORS CORP., CHEV. MOTOR DIV., Detroit, Mich.
Truck, 10 ea—$28,727

GENERAL MOTORS CORP., TRUCK & COACH DIV., East Pontiac, Mich.
Spare parts, truck—$108,332

GENERAL TIRE & RUBBER CO., Dayton, Ohio
Aircraft, tires and tubes—$889,935

B. F. GOODRICH CO., AVIATION PRODUCTS DIV., Akron, Ohio
Aircraft, tires and tubes—$1,153,076

GOODYEAR TIRE & RUBBER CO., Akron, Ohio
Aircraft, tires and tubes—$1,160,908

GOODYEAR TIRE & RUBBER CO., Akron, Ohio
Brake assys., 129 ea—$32,628

GRUMMAN AIRCRAFT ENGINEERING CORP., Long Island, N. Y.
35 airplanes, ground handling equipment—$21,970,333

HOUDAILLE INDUSTRIES, INC., BUFFALO HYDRAULICS DIV., Buffalo, N. Y.
Spare parts, various aircraft—$26,933

HYDRO-AIRE, INC., Burbank, Calif.
Spare parts, aircraft—$362,156

INTERNATIONAL HARVESTER CO., Washington, D. C.
Trucks, 73 ea—$302,194

LEE RUBBER & TIRE CORP., Conshohocken, Pa.
Tire, 2050 ea—$146,859

McDONNELL AIRCRAFT CORP., St. Louis, Mo.
Trucks, 10 ea—$28,727
Spare parts, aircraft—$187,561

MANSFIELD TIRE & RUBBER CO., Mansfield, Ohio
Tire, 2000 ea—$63,520

MARQUARDT AIRCRAFT CO., Van Nuys, Calif.
Ramjet engines for use on Bomarc missile, 177 ea—$2,600,000

MOHAWK RUBBER CO., Akron, Ohio
Tire, 991 ea—$37,142

NORTH AMERICAN AVIATION, INC., Canoga Park, Calif.
Rocket engines—$535,000

PACIFIC TIRE & RUBBER CO., Oakland, Calif.
Tire, 11,800 ea—$271,046

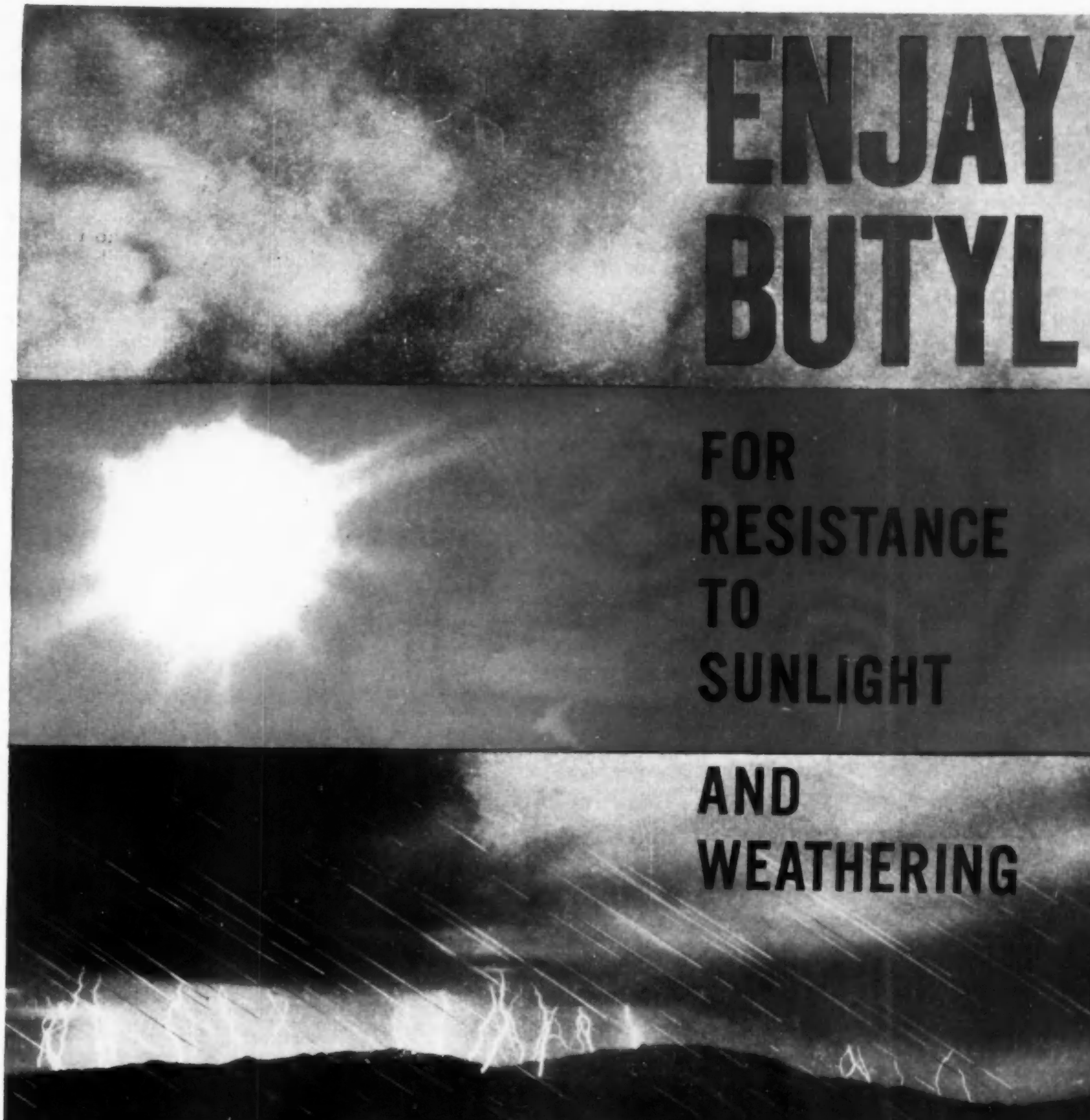
SARGENT ENGINEERING CORP., Huntington Park, Calif.
Spare parts, various aircraft—$110,893

TELECOMPUTING CORP., WHITTAKER CONTROLS DIV., Los Angeles, Calif.
Spare parts, various aircraft—$30,778

UNITED STATES RUBBER CO., Detroit, Mich.
Aircraft, tires and tubes—$1,175,840

UNITED STATES RUBBER CO., Detroit, Mich.
Tire, pneumatic, aircraft, 200 ea—$50,-204

WESTERN ELECTRIC CO., INC., New York, N. Y.
NIKE spare parts & components—$2,-054,623



Butyl's high resistance to ozone is graphically demonstrated when compared with SBR or natural rubber

Enjay Butyl rubber has demonstrated for many years its outstanding ability to resist deterioration caused by sunlight and weathering. This inherent resistance of Butyl to ultra-violet light, ozone, oxidation, moisture and mildew, has made possible many new and colorful products. Butyl has also increased the life of other products such as weatherstrips, protective coating, garden hose, wading pools and many automotive parts.

Butyl *also* offers... outstanding resistance to chemicals, abrasion, tear and flexing . . . superior damping qualities . . . unmatched electrical properties and impermeability to gases and moisture.

For more information call or write the Enjay Company.

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EXCITING NEW PRODUCTS THROUGH PETRO-CHEMISTRY

ENJAY COMPANY, INC., *15 West 51st Street, New York 19, N. Y.*

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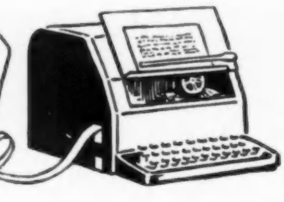
Circle 236 on Inquiry Card, for more Data

ON OUR WASHINGTON WIRE



The Eisenhower Administration is preparing for an all-out fight to force inclusion of tough union controls in the Democratic "sweetheart" Kennedy-Ervin labor measure.

Republicans plan to make their fight when the measure is considered by the full Senate Labor Committee. This GOP group, headed by Sen. Barry M. Goldwater, R., Ariz., let the bill move out of a labor subcommittee without a fight because of the power wielded there by the bill's sponsor, subcommittee chairman John F. Kennedy, D., Mass.

As approved by the subcommittee, the labor reform measure is in the same form as when it was drafted by Sen. Kennedy with the help of AFL-CIO lawyers. It would tighten somewhat controls over management as well as labor.

The Administration will fight to include provisions banning coercive or "blackmail" picketing by unions which do not represent a majority of employes and secondary boycotts by unions not directly involved with an employer.

• • •

National Aeronautics and Space Administration is warning Congress that its current budget ($500 million) is peanuts, compared to what it expects to ask for (and get) in the next few years. "We are making down payment on programs that inevitably will cost very much more in the years ahead," says Dr. T. Keith Glenman, NASA chief.

One example of rocketing costs: the 1.5 million thrust engine in the current budget is a $12 million item. The cost goes to $30 million in the 1960 budget, and ultimately to $200 million.

• • •

Management may find it has to spend considerably more for political lobbying as a direct result of a recent U. S. Supreme Court decision which holds that money spent for lobbying is not necessarily deductible for tax purposes.

Registered lobbyists in Washington see the Court's decision as a severe blow at the rights of businessmen to express themselves before their Federal and state legislatures. New legislation to clear the air may be necessary in order to clarify the right of businessmen to petition their government.

NEW PRODUCTION and PLANT EQUIPMENT

(*Continued from page 302*)

Pneumatic Tire Lift Trucks For Heavy Applications

Dependable power for big truck operations is supplied by 6-cylinder Continental engines in a line of heavy-duty pneumatic tire lift trucks. The power plant develops 153 hp at 2400 rpm, 350 lb-ft of torque. The units, the Challenger 360 and 400, are rated at 36,000 and 40,000 lb capacity at a 36 in. load center. The three-speed range, power shifted, planetary transmission with integral torque converter provides fast, smooth load control. (Hyster Co.)

Circle 42 on postcard for more data

Semiautomatic Welder

A PORTABLE semiautomatic welder, known as the Handomatic, has been designed for either open arc hard surfacing or submerged arc welding.

The unit features a universal semiautomatic wire feeder specifically designed for hard surfacing, build up, and mild steel welding using tubular wires or solid wires, open arc or submerged arc process.

Feed rolls, pressure rolls and current tips are available for 5/64 and 3/32 in. solid hard wire; and 3/32 and 7/64 in. tubular wire. The unit is designed for use with continuous current up to 500 amps using the flux type or open arc gun. The flux hopper holds five pounds of flux. *Hobart Brothers Co.*

Circle 43 on postcard for more data

Gear Shifting Unit

FULLER Mfg. Co. has announced an air-actuated gear shifting control unit for 10-speed Fuller RoadRanger transmissions.

Called Fullair control, the unit consists of a small master control which replaces the conventional gear shift lever or corresponding part of a mechanically actuated remote control.

Fuller Fullair control unit

Movement of the short shift lever of the master control through the normal shift pattern identified on a slotted template actuates air valves, which in turn release compressed air to a slave unit on the transmission to activate power cylinders in such a manner as to select and engage the particular gear combination required by the driver. *Fuller Mfg. Co.*

Circle 44 on postcard for more data

(*Turn to page 316, please*)

(Continued from page 315)

Anchor Stops

Two anchor stops provide an inexpensive and easy means of indexing or positioning drill templates or other tooling onto the work prior to drilling or other fabricating operations.

The anchor stops are simply pressed into a drilled hole or punched ⅜ in. diameter hole in 0.060 in. or thicker aluminum template material. The double row of serrations at the base of the stop provides a positive lock into the template.

The anchor stop has a ½ in. diameter and can be extended beyond the template surface at heights from 0.125, 0.187, 0.250, 0.312 to 0.375 in. *Hi-Shear Rivet Tool Co.*

Circle 45 on postcard for more data

End Milling Cutters

Type "G" end mills are made with a generated flute shape in one continuous, flowing curve surface from the cutting face of one tooth to the cutting face of the adjacent tooth, including the relief back of the adjacent tooth.

These end milling cutters are ground from the solid on special grinding machines. Another feature of the mills is the eccentric radial relief on the outside diameter, which eliminates the possibility of heel drag.

Four-tooth end mills from ⅛ to ½ in. in both single and double end types are available, as are two-tooth mills in the single end type from ¼ to ⅜ in., and double end from ⅛ to ⅜ in. *Pratt & Whitney Co., Inc.*

Circle 46 on postcard for more data

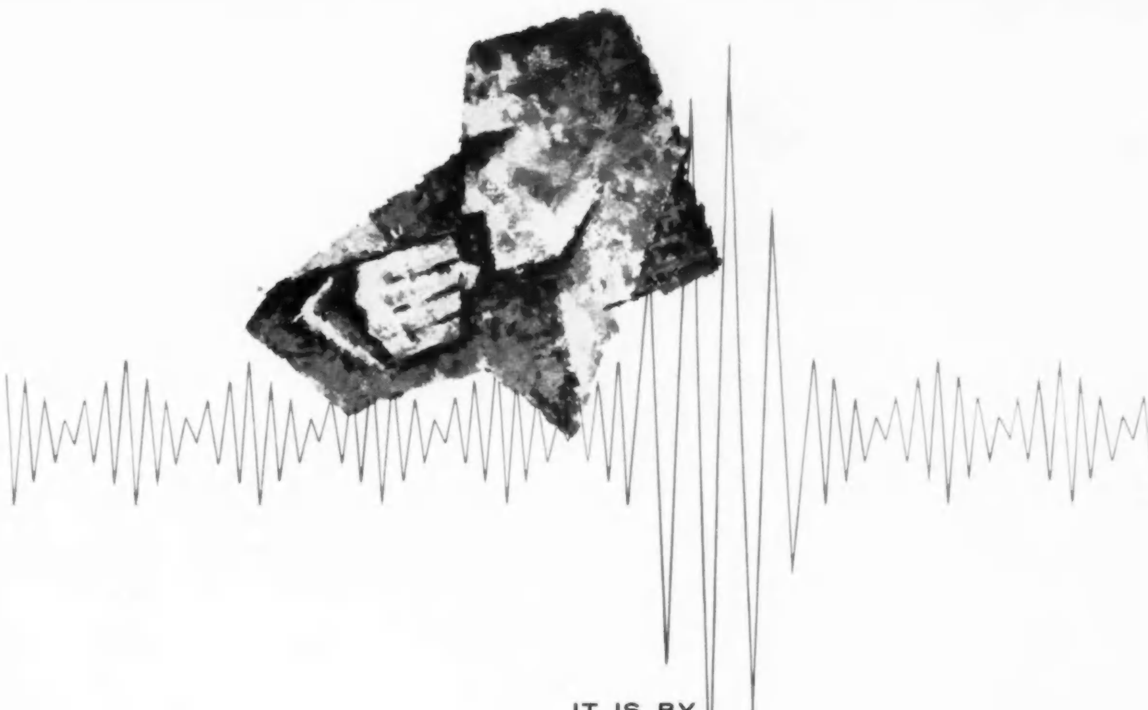
Strip Stock Feeders

A series of automatic strip stock feeders for the blanking of hot or cold phenolics, fibre, hard rubber and compositions has been announced by Technical Design & Development Co., Inc.

The machines attach directly to the bolster plate of any standard blanking press and automatically feed strip stock material from a magazine on top of the machine, through a heated oven and into a roll feed, then into the blanking die. The entire machine is synchronized with and driven by an adjustable cam mounted on the end of the press crankshaft with a connecting rod to the roll feed.

Designated Series 65, the units can handle strip stock from ½ to 6-½ in. wide.

Circle 47 on postcard for more data



Automotive Industry Expands in Brazil

By L. M. PEPPERCORN

THE automobile industry in Brazil has been growing steadily during recent years. Naturally, this growth has increased the demand for skilled labor and for spare parts.

It is estimated that the automobile industry will need an additional 40,000 workers by 1961 to supply the increasing demand for motor vehicles.

There are seven vehicle manufacturing companies in operation and almost 1000 plants which make parts and components. These plants employ a total of 30,000 persons.

One of the most recent in the field of parts manufacturing is the Equipamentos Clark Mac S.A. in which are associated Clark Equipment Co. of Buchanan, Mich., as well as Valinco-Sociadade Administracao e commercio and Mac S.A. The new company will receive about 80 per cent of its equipment from Clark in the U. S. A large percentage of the raw material will be supplied by domestic sources.

In a small way Brazil is exporting trucks and spare parts to other Latin American countries. The National Motor Factory ships trucks to Bolivia, and spare parts are bought by Uruguay, Argentina, and Paraguay.

DKW station wagons and small sedans are on the market in Brazil, and are sold almost as fast as they are made. Willys do Brazil plans to produce 40,000 vehicles, 100 per cent domestically made, by 1961 and hopes to be in a position to make automobiles at the rate of 20,000 annually after 1961.

General Motors of Brazil has signed a contract with a local company, Arno S.A., to supply starting motors and generators of the Delco-Remy type.

Gradually, Brazil is trying to make itself self-sufficient in the automobile industry. While in 1952 Brazil imported automobiles worth $300 million, it is hoped that by 1961 it will be in a position to manufacture its own passenger cars, trucks, buses, etc., with an average value of $3000. It is further estimated that in 1961 it will be necessary to import some spare parts only from abroad. Their value will be approximately $50,000,000. Possibly, the year after that even such importation will cease completely.

Though the opening of new highways is slow, the demand for motor vehicles is increasing to such an extent that it is believed in 1962 the market can easily absorb 80,000 trucks, 15,000 jeeps, 15,000 tractors, and 20,000 automobiles. By that time the total will be 1,230,000 vehicles. Naturally, this seems relatively little for a country of 60,000,000 population. However, in the hinterland there is hardly any travel by motorized vehicles because of lack of roads. Thus, the concentration of vehicles will remain in a few larger cities and towns along the East Coast. ■

SHORTIES

The free world added 53.8 million net tons to its steelmaking capacity between 1955 and 1958, compared with 19.8 million tons for Russia and its satellites.

●

Between 1955 and 1958, the U. S. increased its steelmaking capacity by nearly 14.9 million tons, while Russia added 10.3 million.

●

World steel production during 1958 was about 296 million net tons, a drop of 8 per cent from the record of 322 million tons made in 1957.

●

Russia and its satellites produced nearly 86 million net tons of steel in 1958, compared with about 79 million tons the previous year. Practically all of the increase was in Russia and China, although every country in the Red bloc showed a small output gain.

●

Iron and steel companies in the U. S. spent $1.2 billion for new equipment and construction in 1958, raising the postwar total for such outlays to more than $11 billion (1946 to 1958 inclusive).

●

Between 1940 and late 1958, total employment costs per hour worked by steelworkers had quadrupled.

●

More than half the metallic weight of the average missile in America's arsenal is reported to be made up of steel.

●

The making of iron and steel products and their direct use accounts for 37 per cent of all U. S. manufacturing jobs.

●

Turbine powered aircraft now on order by the world's airlines will provide as much new passenger transport capacity as 160 ships of the Queen Mary class.

●

A research aircraft scheduled to fly soon is designed to withstand temperatures ranging from 1000 F to 300 deg below zero.

News of the
MACHINERY INDUSTRIES

(*Continued from page* 298)

duced" with the adoption of aluminum engines. He predicted "a change in the types of machines and cutting tools—certain present types will become obsolete, while other new types requiring more precision and higher speeds and feeds for aluminum will be required—thus, overall, there should be no reduction in the total value of machines or machine tooling."

Cross Transfer-Matic Has Unusual Application

Typewriter frames are now being turned out on what is said to be one of the first successful automated transfer lines built for processing business machine components. Designed and made by The Cross Co., the new Transfermatic machines aluminum die-cast frames at the 100-per-cent-efficiency rate of 150 per hour.

The part presented problems because of its low rigidity, plus the necessity of holding close tolerances. As a matter of fact, Cross believes it to be the "flimsiest" part ever produced on a transfer machine. Particular attention was therefore given to clamping and support of the workpiece to avoid distortion during machining.

In all, 105 broaching, milling, drilling, reaming, spotfacing, chamfering, and tapping operations are performed on each part. Typical tolerances are rail seats in plane within 0.001 in.; overall length within 0.003 in.; shaft holes in line from end to end within 0.001 in.

LeBlond Builds "Wrapping" Lathe

To meet the special requirements of an undisclosed West Coast missile manufacturer, R. K. LeBlond Machine Tool Co. has produced a double-bed "wrapping" lathe. It is said to be the first double-bed lathe made in this country, and the heaviest (150,000 lb) and largest swing lathe ever built by LeBlond.

The machine is 54½ ft long, 45 ft between centers, swings 105 in. over the platen and carriage wings, has two parallel beds, and is powered by a 50-hp motor.

Called the Admiral combination turning and wrapping lathe, it will be equipped for turning but details of its main application—"wrapping"—are classified.

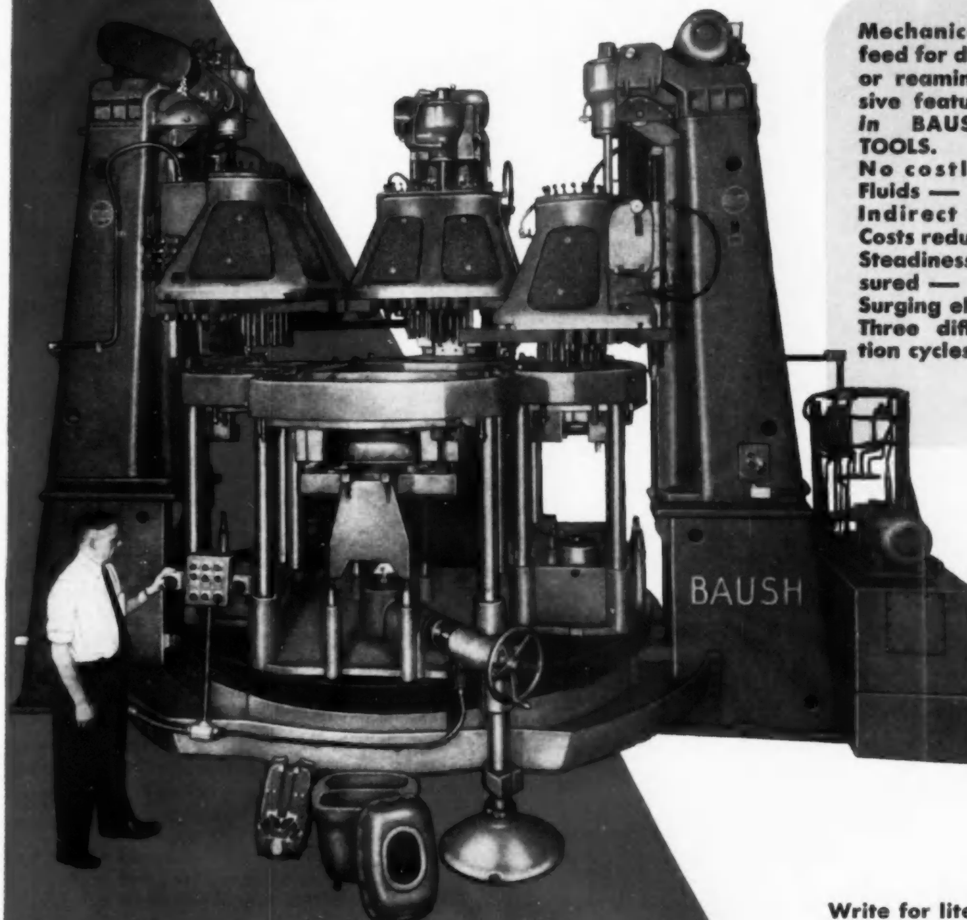
Four-Machine Setup Works As a Team

Buhr Machine Tool Co. has teamed together four individual automatic machines to give some of the advantages of "automation" in a relatively-low production application. The setup was designed for finishing the openings in both sides and both ends of cast-iron tractor transmission cases.

This "team" of four Economatics permits banking of partially-finished parts between each pair of

VERSATILE MECHANICAL LEADSCREW MACHINE

With Master Fixture Holding Units and Mounting Plates, Drills, Taps and Reams 39 Different Parts of Gas Meter Accurately and Economically



Mechanical Leadscrew feed for drilling, tapping or reaming is an exclusive feature *found only in* BAUSH MACHINE TOOLS.
No costly Hydraulic Fluids —
Indirect Maintenance Costs reduced —
Steadiness of feed insured —
Surging eliminated —
Three different production cycles.

Write for literature on this NEW M-20 MECHANICAL LEADSCREW machine NOW. Send us your problems — our Engineers can help you.

SPECIFICATIONS:

Each of three vertical columns mounts an M-20 Mechanical Leadscrew Machine. The 124" diam. Semi-Automatic Hydraulic Rotary Indexing Table has four stations. M-20 Units are mounted at Stations 2 - 3 and 4. Each head is 27" x 40" and is bored for 32 spindles with 32 upper spindle drivers 1½" in diam. arranged for 2 speeds and a neutral position. Both feed and spindle speed are variable . . feed can be varied from .005 per Rev. Low to .090 per Rev. High, and spindle speeds from 130 RPM to 1050 RPM.

Feed is thru ball screw direct from spindle driving gears. When a head goes from rapid traverse to feed stroke an electric brake holds leadscrew and shuts off traverse motor — saving wear and tear. Heads have automatic high production cycle — semi-automatic low production cycle, and a jog cycle for set-up. Machine has 98 spindles and adjustable arms. Operation sequence is:

Station 1 — Unload and load
Station 2 — Multiple Drilling
Station 3 — Multiple drilling, chamfering and reaming.
Station 4 — Multiple Tapping (Master Leadscrew Method)

Machine has:

3 — 20 HP 1800 RPM motors for spindle drives
3 — 1 HP 900 RPM motors for Rapid Traverse Heads
1 — 7½ HP 1200 RPM motor operating Rotary Table.

BAUSH
MACHINE TOOL CO.
SPRINGFIELD 7, MASSACHUSETTS

Circle 246 on Inquiry Card, for more Data

machines. If one machine is down for tool change or maintenance, the others can continue producing. All are automatic in operation after a part is loaded; and in basic design are the same (although three are of the three-way-operation type, and the fourth is a two-way type).

Four-relay plug-in units have been developed for the control panels, using identical relays. Each control panel has five of these package units. Four are in use and the fifth is a spare. The relays of one package control the part-clamping cycle, while the other package units control the cycles of the machining heads.

Rough, semi-finish and finish boring, and facing operations are performed by these machines. The operations on one piece in each machine, including loading and unloading, are completed in from 1.6 to 2.8 minutes (the latter time includes back-boring).

ASM Division Provides Course on Tool Steels

A new course on "Tool Steels" has been made available by the Metals Engineering Institute—the home study and in-plant training division of the American Society for Metals.

The purpose of the 15-lesson course is to teach the principles of manufacture of tool steels, and the selection of tool steels for specific applications. Its co-authors are Dr. George A. Roberts, vice-president-technology, and Dr. John C. Hamaker, manager of research, Vanadium Alloys Steel Co.

Further details are obtainable from the Institute at 7301 Euclid Ave., Dept. NR-2, Cleveland 3, Ohio.

Around the Industry

E. W. Bliss Co.—has formed a new sales organization called the Special Products Div. and headed by Robert E. Reilly as sales manager, to handle the sale of special equipment and the negotiation of Government contracts. Mr. Reilly will make his new headquarters at Canton, Ohio. L. P. Sinclair, Jr., has been made Washington representative. T. F. Lynch will cover the Midwest and make his headquarters at Canton. R. E. Bailey will represent the new division on the West Coast, with headquarters in Los Angeles.

Pratt & Whitney Co., Inc.—Jacob J. Jaeger, formerly vice-president in charge of engineering, has been named executive vice-president. H. J. Fredericks, treasurer-controller, has been made a vice-president. E. J. Shages, formerly vice-president and manager of the cutting tool and gage division, has been named vice-president in charge of manufacturing for all operations.

Arrangements have been made with **The Wade Tool Co.** of Waltham, Mass., for Pratt & Whitney, through its branch office representatives, to handle the sale of the Wade line of precision lathes.

Cadillac Gage Co.—Howard Carson was elected vice-president of the company and general man-

ager of the Costa Mesa, Calif., operation at a recent board meeting. This Ex-Cell-O Corp. subsidiary makes electro-hydraulic servo valves, inspection gages, and fire control systems for Army tanks.

Clearing Machine Corp.—has appointed International Machinery Co., Ltd., as its dealer in Canada for the full line of Clearing hydraulic and mechanical press equipment.

Cincinnati Milling Machine Co.—Dr. M. E. Merchant, senior research physicist, has been named the recipient of the 1959 ASLE National Award. It will be presented to him at the annual meeting of the American Society of Lubrication Engineers, to be held at Buffalo, N. Y., on April 21-23. The award is made annually in recognition of an outstanding contribution to the field of lubrication. Dr. Merchant's work has dealt primarily with the chemistry of reactions occurring in metal cutting and metal cutting fluids.

Vinyl Coated Steel

(*Continued from page* 291)

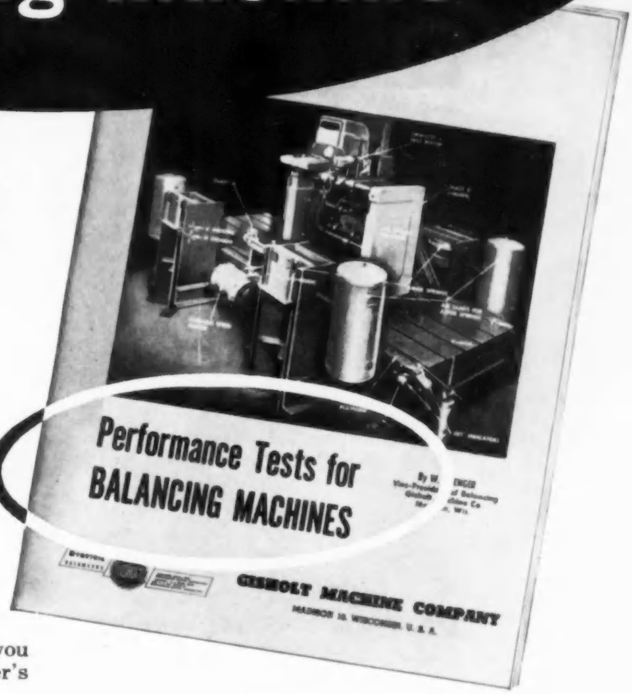
tinuous basis, under 212 F for two days. It will soften appreciably at 350 F and char at above 400 F. It will not support combustion.

BACK SIDE PROTECTION — In many cases protection for the reverse side is not needed because the vinyl coated steel sheet is phosphatized in production. Also available for back protection as the material comes from the mill are hot dipped zinc, modified epoxy resins and temporary chemical treatments. Indoor and outdoor tests indicate that under-film corrosion is not a problem.

SCUFF AND ABRASION RESISTANCE—The vinyl coating provides excellent protection against wear of this type.

STAINING — The product shows no staining from conventional die lubricants, alkaline cleaners, fountain pen ink, alcoholic beverages, detergents, acid cleaners, nail polish, or fruit acids.

What you should know before you buy *any* balancing machine



What are your requirements in balancing? For plane separation? Accurate amount and angular location indication of unbalance? Operating speeds? Correction equipment? Production?

this free booklet tells you

Suppose you have a problem in weighing. Will you choose platform scales? Bathroom scales? Grocer's scales? Chemist's scales? Electronic scales?

If you balance rotating parts, remember this: there's as much difference in balancing machines as in weighing equipment.

A balancing machine is a quality control device. It indicates the angular location and weighs the amount of material which should be added or removed from a rotating assembly to eliminate vibration at the supporting bearings. It is vital that the equipment you buy to improve your product quality has the required sensitivity to do a consistent job under shop conditions.

To help you appreciate the important factors in specifying the proper equipment for your needs, Gisholt offers this new booklet. It will aid you in analyzing your type of work and provide a logical basis for your specifications and performance test requirements.

Test before you buy!

To be sure your new balancing equipment is the type best suited to your needs, *first specify*—then insist that your specifications be met. Comparative tests cost you nothing. And no reliable supplier of balancing equipment will refuse to cooperate in these tests.

Your copy of "Performance Tests for Balancing Machines" will be sent upon request. Use the coupon.

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GISHOLT MACHINE COMPANY

Madison 10, Wisconsin

Investigate Gisholt's Extended Payment and Leasing Plans

Turret Lathes • Automatic Lathes • Balancers • Superfinishers • Threading Machines • *Factory-Rebuilt Machines with New-Machine Guarantee*

Gisholt Machine Co., Madison 10, Wisconsin

Please send a copy of the new booklet "Performance Tests for Balancing Machines" by return mail.

Name........................... *Title*..............

Company...

Address...

City......................... *Zone*...... *State*.......

Crack-Free Chromium Plating for Power Steering Parts

By H. Mahlstedt

METAL & THERMIT CORP.

The finishing of pistons and cylinders in the hydraulic field where the parts may be exposed to corrosion and abrasion, as in power steering units and in roadbuilding and earthmoving machinery, has been a problem for sometime. The recent development of an industrial crack-free chromium plating process appears to have solved the problem.

From the point of view of abrasion resistance, chromium has proved excellent. Due to its hardness, chromium was also thought of as being excellent for wearing properties; it also has low frictional resistance. However, from the standpoint of corrosion resistance, the formation of minute cracks in the finish allowed corrosive material to come in contact with the base metal, permitting the formation of corrosion.

That one difficulty was overcome recently with the development by Metal & Thermit Corp. of a crack-free chromium plating process which allows the even deposition of chromium without the formation of the usual cracks. This plate, instead of having the bright finish of ordinary chromium plating, has a matte finish of light gray.* The surface is smooth to touch and there is good oil retention.

Since there are no cracks in the plating, it is not possible for salt water or humidity to reach the basis metal and attack it. This eliminates the possibility of corrosion of the part, except in cases where the coating has been broken in some way.

The extreme hardness of chromium plating, which carries through to the crack-free plating, increases the part's resistance to abrasion. In all but extreme cases, where a sharp object may hit the piston making a hole in the plate, the piston is protected completely from abrasion from dirt and mud as well as airborne dust.

The experiences of Bendix Products Div. of Bendix Aviation Corp. with crack-free chromium plating in power steering units indicate that it is highly satisfactory for this use. Bendix designed and has been manufacturing for several years power steering units used on the products of Ford Motor Co., both passenger cars and trucks. In these units, the piston in the power cylinder is plated with the crack-free chromium.

The parts vary in size from lengths of 9.38 to 24.31 in., and in outside diameter from ½ in. to 1½ in. The pistons are manufactured of steel and are turned, ground, and polished before plating.

Actual plating at the Bendix

plant in South Bend, Ind., is carried out automatically. The deposit is applied at thicknesses of 0.00035 to 0.00045 in., using standard plating procedures. Rigid control is maintained over the strength and temperature of the solution and the current. Results have been reported to be uniformly excellent, particularly as far as corrosion resistance is concerned.

Another firm in the Midwest, plating pistons and cylinders for road-building equipment, plates the parts to thicknesses of 0.0003 to 0.0005 in., with tests run by outside laboratories on the corrosion and wear resistance on the parts. Again, consistently high performance has been reported for the parts plated with the crack-free chromium. ■

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* *In addition to the satin-finished chromium referred to above, Metal & Thermit Corp. has also developed a crack-free deposit which is bright. This development, used for decorative deposits, was discussed in articles appearing in Dec. 1, 1957, and May 15, 1958, issues of* AUTOMOTIVE INDUSTRIES.

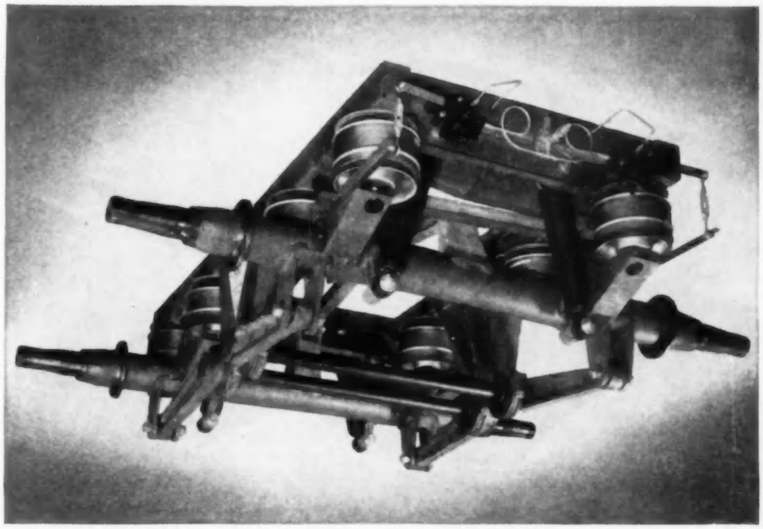
BOOKS . . .

CELLULOSICS, *by Walter D. Paist, published by Reinhold Publishing Corp., 430 Park Ave., New York 22, N. Y. Price, $5.75.* A concise survey of the applications of cellulosics based on their properties. Chapters on the chemistry, properties, and fabrication methods of the cellulosics are followed by a discussion of applications. These latter include fibers, films, molding powders, protective coatings, adhesives, thickening agents, and a wide variety of other uses. An appraisal of the industrial future of the cellulosics rounds out the survey.

MATERIALS AND PROCESSES IN MANUFACTURING, *by E. Paul DeGarmo, published by The Macmillan Co., 60 Fifth Ave., New York 11, N. Y. Price, $8.75.* This book is intended primarily as a college-level text for engineering students. As engineering curricula have changed during the past 20 years, there has been a justifiably greater emphasis on science, and the elimination of the old "shop" courses. At the same time the need has increased for adequate instruction relating to the materials and processes which are used to manufacture the "hardware" which is the end product of much of the engineer's endeavors. Nearly all engineers are vitally concerned with materials and processes as regards the opportunities they provide for, and the limitations they impose on, the translation of ideas into reality. Instruction in materials and processes usually is provided in one of two ways. One uses an integrated course which covers both subjects; the other utilizes one course in introductory metallurgy and a second course in manufacturing processes. This text has been organized to meet the needs of both plans.

(Advertisement)

TORQUE TALK FROM CLARK® EQUIPMENT



TONS OF CARGO FLOAT ON AIR

with new Clark Air Suspension System for highway semi-trailers

Damage to fragile highway cargo or empty trailers in transit can now be virtually eliminated. Key is Clark Air Suspension. In this new system, doughnut-shaped "air-springs" carry full weight of trailer and cargo. A gentle cushion of air absorbs road shock, literally "floats" cargo and trailer over the bumps with a ride approaching passenger car softness. Empty, for example, a Clark Air-Suspended trailer develops a spring frequency of only 95 cycles per minute; loaded, only 89 cycles per minute.

Lateral roll and sway are minimized by an ingenious system of pivoted torque arms and torsion bars which take the full force of side loads and absorb torsion resulting from brake torque. Trailer loads need no longer be precisely balanced. Offset loading is accommodated by a system of automatic air valving, which feeds and bleeds the air springs to keep the trailer bed level at all times. When loading or unloading trailer, air reservoirs automatically adjust to support bed at normal running height.

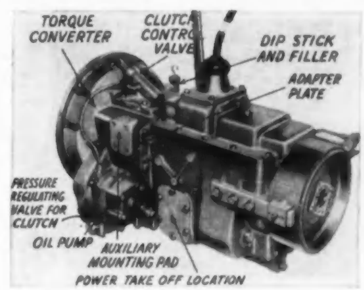
A safety pressure regulator valve, on the line leading from the truck's compressor, is designed to shut off at 60 psi...leaving ample air pressure for the service brake system.

Clark Air Suspension assemblies come as complete packages, ready for installation on new or in-use semis, in single and tandem units. Other advantages include lower trailer maintenance costs and substantial weight reduction possibilities for trailer manufacturers.

NEW POWER TRAIN DESIGNED FOR STOP & GO OPERATION

Designed specifically for off-highway and stop-go operations, Clark Equipment Company's new TransVerter is ideal for such equipment as house-to-house delivery trucks, buses, garbage trucks and various types of construction machinery. Rated for engine torque output up to 325 lb-ft, the TransVerter power train package consists of a torque converter, hydraulic disconnect clutch and standard transmission. Because of its compactness—only 8 inches longer than a conventional transmission and clutch—the TransVerter can often be installed by the original equipment manufacturer without major re-design of his line.

Operational advantages of the new Clark power train include elimination of engine stalling and lugging . . . sharp reduction in gear shifting, to the point where most work can be performed in the same gear . . . fine inching control, simply by working the throttle. Provision is made for SAE power-take-off attachments, to be driven by the torque converter. The hydraulic disconnect clutch is an off-on type unit that does not require "letting in" or "easing." A variety of clutch releases can be provided, including a shift lever button or a conventional-looking pedal raised slightly from the floorboard.



FOR YOUR READING RACK

NEW AUTOMOTIVE BOOKLET

Dramatic portrayal, in 24 pages, of Clark's basic line of automotive components. Includes illustrations of the Clark constant mesh and synchronized transmissions, TransVerter, StepMatic, power-shift transmissions, torque converters, agricultural units; also automotive driving and steering axles; planetary, industrial and trailer axles; air suspension assemblies; rear axle housings and electric steel castings.

CLARK FULL-LINE BOOKLET

A 48-page, full-color booklet in handy pocket size is your condensed guide to the entire product line of Clark Equipment Company. Automotive components, materials-handling equipment, construction machinery—all are described in concise detail. Basic information on the eight Clark plants and brief insight into corporate philosophy make this booklet a "must" for your reading rack.

For Further Information

. . . and full details on any of Clark's automotive components, simply address a card or a call to:

CLARK EQUIPMENT COMPANY

AUTOMOTIVE DIVISION

Buchanan or Jackson, Michigan

TransVerter and StepMatic are trade-marks of Clark Equipment Company

Circle 254 on Inquiry Card, for more Data

A New Approach to Optimum Steering Control

By A. E. Bishop

Bendix Products Div., Bendix Aviation Corp.

THE present proposal amounts to making a variable ratio steering gear simulate the speed responsive system. For convenience the term Varamatic has been used to refer to this concept, and to clearly define a steering gear whose ratio varies more or less in a hyperbolic fashion.

The unique form of hour glass worm shown in Fig. 1 is incorporated in the production design. With this arrangement the low lead areas occur on the largest diameter, which provides better contact at the more critical and predominantly used in-line position. The action of the twin-follower design can be seen from the illustration. The center view shows the system in the in-line position with contact occurring on the more cylindrical sections of the hour glass worm. It can be seen that there is clearance between the flank of the hour glass worm thread and the followers. After about one-half turn of the steering wheel, contact changes over from the barrel surface of one roller to the flank of the opposite follower continuing in mesh. From this point on further rotation of the hour glass worm controls the rotation of the pitman arm between one barrel contact condition and one flank contact condition. Parts of its thread are, in effect, used both in right and left turns, and this accounts for the compactness of the design.

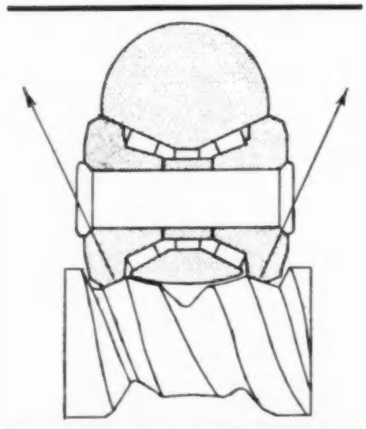


Fig. 1—Action of hour glass worm and twin follower

A more direct steering system is an improved tool, and achieving this directness through variable ratio has the advantage that the change may be made in graduated steps. Tests have shown that a reduction of turns of 30 per cent involves little change of driver habits, and may be regarded as the first step.

With respect to the more radical forms, which might reduce the turning of the wheel to one and one-half or even one turn, a thorough evaluation can only be made by a driver who continues to drive a car for several days, as it takes that time for him to reorganize his hand motions and to fully explore the new maneuvers which become possible with this system. For example, clean intersection turns may be made in a way

There is no <u>substitute</u> for stainless steel

in automobiles

No other material is as bright, strong and resistant to rust and wear as Stainless Steel. It gives every car the clean, exciting beauty that sells in the showroom and re-sells on the used car lot. Look for *Stainless Steel* on your new automobile.

Specify McLouth high quality sheet and strip Stainless Steel. McLouth Steel Corporation, Detroit 17, Michigan.

McLOUTH STAINLESS STEEL

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which is never realized in a standard car.

The trend in recent times towards valving with less lag and higher boost, and towards more responsive tires, and more neutral steer handling of the car will increase the on-center sensitivity, and this logically will call for higher ratios. With this development, ratios as high as 25:1 in-line might be used without penalizing lock to lock turns. ■

Trend In Construction Equipment

(*Continued from page* 292)

sidiaries, located in Great Britain, Brazil, and Australia, reached a new high, however.

* * *

Koehring Co., Milwaukee, announced the purchase of Stardrill-Keystone Co., Beaver Falls, Penna., for a sum stated as "in excess of a million dollars." The purchase, subject to determination by auditors, will add about $4 million per year to Koehring's volume of business, it was stated by Julien R. Steelman, president of the Milwaukee construction equipment manufacturing concern.

Expansion of General Aviation

(*Continued from page* 311)

Present Problems

Although expansion is the general trend for general aviation's supplier and distributor industry, there are still several obstacles to be overcome.

One is the lack of communication with aircraft makers. Only in recent years, partly through the efforts of organizations like the ADMA, have the supplier and distributor been able to meet on an equal basis with the airframe builder and discuss and share the responsibilities necessary for their continued growth and progress.

Another problem that is felt by the airframe builder, supplier and distributor alike, is in the area of public relations or, more specifi-

1969 A.D. with AC!

Fabulous Firebird III Sparked by AC!

This space-age-inspired car is off and away! Under its missile-like skin are two different engines—both sparked by AC! The 225 hp gas turbine "Whirlfire" uses aircraft type AC Jet Igniters. The 10 hp aluminum reciprocating engine called "Little Joe" relies on automotive type AC Hot Tip Spark Plugs. With "Little Joe" operating the accessories, "Whirlfire" can devote all of its power to propelling the Firebird. For your automotive equipment needs of today or tomorrow, phone or write any of the AC Equipment Sales Offices.

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DETROIT—General Motors Building—TRinity 5-2630

cally, the seeming inability of the industry to convince the public of the safety, usefulness and economies of private or corporate aircraft. However, both segments of the industry are taking steps to improve in these areas, and with concentrated efforts like those of late, soon the problem will not be one of creating customer demand but one of the ability to meet that demand.

SUPPLIERS SERVING GENERAL AVIATION AND THEIR MAJOR PRODUCTS

Members of the Aircraft Distributors & Manufacturers Association, Manufacturers Division

AC Spark Plug Div., General Motors Corp.
Aircraft spark plugs and related equipment, gages, instruments, fuel pumps, etc.

Aeroduct, Inc.
Aircraft ducts, plastic fiberglass and rubber products

Aeroquip Corp.
Flexible hose, couplings, load control and tie down equipment, etc.

Aircraft Specialty Lines, a Div. of Savage Industries, Inc.
Low frequency radio direction finders

The BG Corp.
Aircraft spark plugs and related equipment

Bendix-Skinner Div., Bendix Aviation Corp.
Filters, ground handling and refueling equipment, test stands, etc.

Bendix Products Div., Bendix Aviation Corp.
Fuel metering and landing gear equipment

Champion Spark Plug Co.
Spark plugs and related accessories, service tools, etc.

Collins Radio Co.
Communication and navigation equipment

Continental Motors Corp., Aircraft Engine Div.
Aircraft engines, parts and equipment

Co-Operative Industries, Inc.
Ignition harnesses, hose and tubing, assemblies for microwave transmission

Curtiss-Wright Corp.
Windshield wipers, needle control valves, precision spring clutches

Eclipse-Pioneer Div., Bendix Aviation Corp.
Flight control systems, instruments, stabilization equipment, etc.

Electric Auto-Lite Co.
Batteries, ground starting equipment

Exide Industrial Div. Electric Storage Battery Co.
Batteries and applicable accessories

Federal Ski & Engineering Co.
Aircraft skis and accessories, floats, pontoons and special equipment

Flightex Fabrics, Inc.
Airplane fabrics and tapes, insulation products.

Glidden Co.
Finishing products, non-skid compounds, etc.

(*Turn to page* 338, *please*)

Suppliers Serving General Aviation

(Continued from page 336)

Globe Industries, Inc., Special Products Div.
Electric motors, actuators, instruments, gyros, auto-pilots, rescue breathing apparatus

B. F. Goodrich Aviation Products, Div. of B. F. Goodrich Co.
Abrasion shoes, cements, de-icers, rubber products, hose, fuel and oil tanks, tires, tubes, wheels and brakes

Goodyear Tire & Rubber Co.
Tires, tubes, wheels and brakes, fuel and oil cells, skid warning systems, cross - wind landing wheels, etc.

Grimes Mfg. Co.
Lighting equipment, flasher units, motors

R. M. Hollingshead Corp.
Cleaning compounds, gasket makers, rust preventatives, paint remover, sprayable plastics

H. D. Hudson Mfg. Co.
Sprayers

International Telephone & Telegraph Corp.
Autopilots

Kilgore, Inc.
Flares, signals, igniters

Lamson & Sessions Co.
Bolts, nuts, screws, cotter pins, etc.

Lycoming Div., AVCO Mfg. Corp.
Aircraft engines

Marvel-Schebler Products Div., Borg-Warner Corp.
Carburetion equipment

McCauley Industrial Corp.
Controls cables, terminals, tie rods, slings, metal, wire rope, etc.

Miracle Power Products Corp.
Lubricants

National Aeronautical Corp.
VHF radio receivers, transmitters, communications, Omni-Range, electronic devices

National Screw & Mfg. Co.
Bolts, nuts, cotters, rivets, screws, welded and weldless chain, hoists, etc.

Pacific Div., Bendix Aviation Corp.
Valves, accumulators, hand pumps, flashers, de-icer timers, radar equipment, etc.

Packard Electric Div., General Motors Corp.
Electric cable and accessories, cords, tools

Permatex Co.
Gasket products, polish, sealant, oil, antiseize compound, etc.

(Turn to page 340, please)

Suppliers Serving General Aviation

(*Continued from page 338*)

Pesco Products Div., Borg-Warner Corp.
Aircraft accessories, pumps, motors, etc.

Red Bank Div., Bendix Aviation Corp.
Inverters, generating systems, starter generators, electronic devices and tubes

Reeves Brothers, Inc.
Airwing fabrics, tapes, linen

Resistoflex Corp.
Hose, fittings and assemblies

Russel Mfg. Co.
Shock cord rings, elastic shock cord, webbings, seat belts, brake lining, etc.

Safe Flight Instrument Corp.
Speed control systems, pre-stall warning systems, instrument panel vibrators, automatic power control systems

Scintilla Div., Bendix Aviation Corp.
Ignition systems, analyzers and related equipment, harnesses, coils, filters, electrical connectors, ceramics, etc.

Scott Aviation Corp.
Oxygen systems, tail wheels, master cylinders, control wheels, instruments, breathing equipment, windshield cleaners, etc.

Sensenich Corp.
Propellers

Standard Pressed Steel Co.
Full line of nuts and fasteners, cap and set screws, bolts, etc.

Switzer Brothers, Inc.
Safety paint for warning approaching aircraft

Temco Products Co.
Aircraft touch-up paint

Texas Metal & Mfg. Co.
Ground handling equipment, sky ramps, stands

United Motors Service, General Motors Corp.
Generators and parts, starting motors, switches, regulators, batteries, and cables

United States Rubber Co.
Tires, tubes, cements, coatings, crash padding, cushions, fabrics, fuel cells, hose mountings, packings, tapes and wire

Utica Div., Bendix Aviation Corp.
Starting equipment, direct cranking starters, etc.

Watertown Div., New York Air Brake Co.
Aircraft hydraulics.

Weatherhead Co.
Tube fittings, hose assemblies, swivel joints, couplings, valves

Weems System Of Navigation
Navigation equipment, plotters, computers, sextants, etc.

Wilcox Electric Co.
Radio equipment

BOOKS . . .

EPOXY RESINS, *by Irving Skeist, published by Reinhold Publishing Corp., 430 Park Ave., New York 22, N. Y. Price, $5.50.* The author discusses the use of epoxy resins as casting and potting compounds, adhesives, plasticizers, coatings, and explains the reasons behind each formulation. Thus, the reader is enabled to choose from the confusing and sometimes contradictory maze of available information. The book also clarifies the puzzling array of trade names, and presents up-to-date formulations and manufacturing procedures.

GUM PLASTICS, *by M. S. Thompson, published by Reinhold Publishing Corp., 430 Park Ave., New York 22, N. Y. Price, $4.50.* This is the first extensive treatment of rubber-modified plastic resins and their uses. The author describes their advantages in terms of product improvement, and shows how certain disadvantages of these materials can be overcome. Special attention has been given to new applications, new compounds, and a discussion of applications now in the development stage.

Advances in Lubricating Oils and Fluids

(*Continued from page* 306)

Another of the industry engineers mentioned that customers sometimes have trouble after a transmission lube change. Major reason for this is that some makes of ATF have a propensity for shrinking oil seals, thus promoting oil leakage. This engineer observed that when they refilled with a fluid known to have the property of swelling oil seals the leakage could be curbed.

Customer Education

A representative of one of the large car makers made a plea for cooperation on a program of customer education. It has been found that many transmission failures are due to extending the drain period beyond the limit specified by the car maker. Customers must be impressed with the necessity for changing ATF at the proper mileage.

Finally, it was the consensus among industry representatives that better ATF formulations are needed. Among other things they must be able to resist high temperatures without coking or varnishing; must have proper quality at low temperatures; and must assure oil seal durability. ■

BOOKS . . .

ELEMENTS OF ENGINEERING MATERIALS, *by Charles P. Bacha, Joseph L. Schwalje and Anthony J. Del Mastro, published by Harper & Brothers, 49 E. 33rd St., New York 16, N. Y. Price $6.50.* This introductory text, designed for students in all branches of engineering, covers engineering materials such as wood, cements, plastics, rubber, soils, metals, fuels and lubricants, as well as the latest practices available in each field. Chapters on the structure of metallic materials, behavior under load, corrosion and its prevention, and the shaping and forming of metallic materials have been included. Due to the wide range of materials covered, each topic is given a comparatively brief, but fundamental treatment. The authors have provided lists of references for further study.

What Causes Smog

By W. L. Faith

Managing Director, Air Pollution Foundation, San Marino, Calif.

How Sunlight Changes Exhaust Into Smog

In an attempt to get more definitive information concerning the relationship between source and smog manifestations, i.e., between cause and effect, the Air Pollution Foundation, San Marino, Calif., contracted with Stanford Research Institute to build a 500-cu-ft smog chamber where various concentrations of hydrocarbons and nitrogen oxides could be subjected to simulated sunlight and where resulting smog effects (eye irritation, ozone, reduced visibility, etc.) could be measured. Because automobile exhaust is probably the only source of pollution that will produce a mixture of hydrocarbons and nitrogen oxides of sufficient concentration to produce smog, experiments so far have been largely with this exhaust gas.

It is interesting to note the changes that take place in the chamber when air polluted with exhaust gases is subjected to simulated sunlight. As an example, let us suppose exhaust gas from an automobile, running through a prescribed operating cycle on a chassis dynamometer, is diluted with purified air so that the hydrocarbon content of the exhaust-polluted air sent to the chamber is about 3 ppm.

If the chamber is kept dark we find that the nitrogen oxide present is in the form of nitric oxide (NO) at a level of approximately 1 ppm. The polluted air is not eye-irritating, practically no aerosol may be found, and ozone is nil.

When the lights are turned on, nitric oxide starts to decrease almost immediately and nitrogen dioxide appears. After about 30 minutes the nitric oxide has been completely converted to nitrogen dioxide and the hydrocarbon concentration has decreased slightly. Then ozone starts to form and builds up to 0.8-0.9 ppm. Eye irritation develops and, depending on several factors, aerosols grow rapidly. Oxidation of the hydrocarbons is further evidenced by the rapid increase in the aldehyde content of the chamber.

Thus it has been demonstrated that automobile exhaust in concentrations comparable to those that may be expected in the atmosphere produces ozone, eye irritation, and aerosols similar to that found in Los Angeles smog.

What Is It in Exhaust That Must Be Eliminated?

One of the objectives of the study to date has been to learn the nature and identity of important factors governing smog formation from automobile exhaust. Is it a

function of engine design? Fuel composition? Amount of sunlight? Or some more subtle variable?

The most important variable uncovered to date has been the ratio of hydrocarbons to nitrogen oxide in the exhaust gases. Unless this ratio is in the range of 1:1 (1 part hydrocarbon to 1 part nitrogen oxide) up to 10:1, no eye irritant, no aerosol, and but little ozone forms.

Automobiles with the engines in such condition that they did not produce an exhaust mixture in the proper ratio to cause a reaction and thus did not produce smog manifestations have been tested. The only problem was to keep them in that condition.

A second set of interesting data was produced when the diluted exhaust in the chamber was measured by gas chromatography before and after irradiation. Apparently the most reactive hydrocarbons, i.e., those that disappear upon irradiation, are the 4-carbon and 5-carbon olefins. Paraffinic hydrocarbons and those aromatics that have been measured react only slowly, if at all. Acetylene and ethylene disappear to some extent; the butenes (4-carbon olefins) and pentenes (5-carbon olefins) and their diolefin homologues react rapidly and totally disappear. Further, a high degree of correlation was found between the amounts of these olefins in the exhaust gas-air mixture and the development of eye irritation. The role of propylene (the 3-carbon olefin) appears to be intermediate between the ethylene (2-carbon) and the 4-carbon and 5-carbon olefins. Higher olefins (6 carbons and above) have not yet been identified, but they appear to be present in much smaller quantities, if at all.

Thus, it appears that the nitrogen oxide-hydrocarbon ratio previously believed to control the smog reaction is a fortuitous happenstance; the controlling ratio is probably the nitrogen oxide to C4-C5 olefin ratio. This concept is being further explored in the study at Stanford Research Institute.

The formation of aerosols by the photolysis of diluted automobile exhaust is apparently related to

the olefin content of the exhaust, but a wider range of olefins may be involved than appears to be the case in the reaction to produce eye irritation. The presence of sulfur dioxide also appears to increase the formation of aerosol.

Attempts to produce typical smog damage on plants, particularly on pinto bean plants, endive, and petunias, all failed. It is interesting to note that the only way the so-called typical smog damage to vegetation has been produced experimentally was by addition of ozone to olefins and olefin-containing mixtures. Many believe that exposure time and humidity are controlling variables.

Certain tentative conclusions may be drawn from the work performed to date. Obviously, the major culprit in Los Angeles smog is automobile exhaust. The most obvious control method is to upset the nitrogen oxide-hydrocarbon ratio; specifically, the nitrogen oxide-olefin ratio. One way to do this would be to increase either the nitrogen oxide content or the olefin content of the exhaust, but not both. Conversely, it could also be done by decreasing one or both of the reactants below the threshold level. Since no one would countenance a planned increase in any air contaminant, the answer is some sort of an exhaust device that will eliminate olefins or nitric oxide, or both.

Why Changes in Gasoline Will Not Reduce Smog

From time to time the suggestion has been made that a change in gasoline composition might also solve the problem. This suggestion is based on the thesis that there is a direct relationship between olefins in the fuel and olefins in the exhaust.

It has been found, however, that even nonolefinic gasolines produce sufficient olefins in the exhaust to produce eye irritation and ozone. When the exhaust from nonolefinic fuel was compared with the exhaust from a composite of all Los Angeles gasolines (15% olefins), no difference could be detected in eye irritation and ozone.

Thus, we concluded that changing gasoline composition is not the

answer to the problem. So, again it appears that some sort of exhaust device to eliminate either olefins or nitric oxide from exhaust is necessary to solve the Los Angeles problem.

Exhaust Control Devices

Let us look, then, at the status of exhaust control devices that show promise of upsetting this oxides of nitrogen-olefin ratio. In recent months the Foundation has worked very closely with private investigators who are spending their own money on the development of exhaust control devices.

One company has developed a direct-flame afterburner that maintains combustion under all automobile operating conditions. This is the only design we have seen that does this. The Foundation has carried out limited tests with the device in the Stanford Research Institute smog chamber and finds that the unit eliminates eye irritation. The unit is still fairly large, so further engineering development is required. Promise of ultimate success is excellent.

A second company of national stature has developed a catalytic unit that reduces the nitric oxide content of automobile exhaust. Limited tests by the Foundation indicate that the unit is based on sound technical principles. Further improvements in efficiency are required.

A third industrial organization has developed a catalytic afterburner that has all the earmarks of becoming an effective, economic, and practical means of controlling automobile exhaust gases. The Foundation has tested an experimental model that had been operated for 6000 miles on a car using leaded gasoline. The unit was highly effective in eliminating eye irritation and aerosol formation. The catalyst becomes effective after the car has been operated for only a few minutes. The device has two other very desirable features in that it muffles engine noise, and stainless steel is not required for the converter housing. Life tests on the catalyst are now under way. We are enthusiastic about the possibilities of this catalytic muffler and believe it represents a real achievement in science and engineering.

We know of half a dozen other devices in various stages of development in both large and small companies, representing an astounding array of some of the best technical minds in the United States—all working on one or more solutions to Los Angeles smog problem with their own money. Here we have an excellent example of the incentive of the profit motive in a democratic society.

In addition to these industrial-sponsored activities, the Foundation is sponsoring basic research on the development of a means of removing active lead from exhaust gases so as to lengthen catalyst life and a study of the chemical reduction of nitric oxide in exhaust gases.

Some of our recent tests at Stanford Research Institute are pointing the way to other means of solving the auto exhaust-smog problem. As mentioned previously,

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What Causes Smog

(Continued from page 348)

we have tested two models of two popular makes of cars in such condition that we could not produce eye irritation by irradiation of the exhaust. We do not know how long these particular cars would remain in this condition, because by means of a simple adjustment to simulate changes that take place during normal engine use, we later caused them to produce eye irritation. If this adjustment is so critical, perhaps others are also.

So, in cooperation with the Automobile Manufacturers Association, we are embarking on a test program to study the effect of engine variables on the production of smog. It may be that eventually cars can be built that will not produce smog and thus not require special control devices. The possibility is certainly intriguing. But this is the long-range solution.

Redoubled Efforts Needed —Whose Responsibility?

In the meantime we must redouble our efforts to aid industry in the development of effective and economic control devices, and there is a tendency in some quarters to foist this job on the Federal government. Suggestions of this sort are based on the notion that a device that will settle the Los Angeles problem will be equally applicable in other areas. This is a questionable assumption.

The low-inversion, low-wind, intense-sunshine regime necessary to develop eye irritation from auto exhaust seldom occurs in areas other than the West Coast. Any Federal bureau studying auto exhaust would be obliged to study its nationwide aspects and to keep the Los Angeles problem in the proper relationship to the whole.

The most common complaints of citizens, health departments, and air pollution control organizations elsewhere are these three:

1. The visible smoke and disagreeable odor of exhaust, particularly from buses and trucks.
2. The potential hazards of car-

(Turn to page 354, please)

NEW PRODUCTION EQUIPMENT

(Continued from page 316)

Insert Driver

THIS "Titan" threaded insert or stud driver drives self-tapping or regular insert to an accurate position. Selective position is accomplished by a wide-range depth gage on the driver while it is rotating. The depth gage is ball bearing mounted, eliminating marking of casting face.

Named "Inserto," the driver has a primary clutch for driving and a secondary positive clutch for reversing out of the insert after it has been driven. When the insert has been driven to the proper position, the primary (drive) clutch disengages. When motive power is pulled back to actuate the automatic reverse, the secondary clutch engages and the "Inserto" reverses out of the pre-driven insert. It can be used with a tapping head mounted on an ordinary drill press; or with automatic air or electric tapping motors when provision is made to keep the tool at right angles to the face of the casting. *Titan Tool Co.*

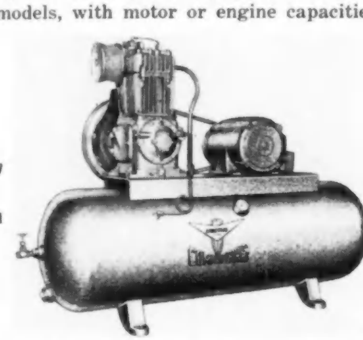
Titan Inserto threaded insert or stud driver drives self-tapping or regular inserts.

Circle 48 on postcard for more data

Air Compressors

A COMPLETE line of air compressors for automotive and industrial applications has been introduced by Lincoln Engineering Co.

The compressors, of the reciprocating type, are available in over 200 models, with motor or engine capacities from 1/4 hp to 20 hp, air displacement up to 92 cfm, and tank capacities up to 200 gallons.



Lincoln reciprocating type compressor

Circle 49 on postcard for more data

Hardening Furnace

A CONTROLLED atmosphere hardening furnace with bottom loading and discharging, spanning a pit containing an atmosphere quench chamber, a salt quench tank, rinse tank, and draw furnace has been designed by Lindberg Engineering Co.

The unit is designed to handle requirement for production of rocket motor cases. It will also be available for other applications of large parts which must be heated in atmosphere, and quenched in either atmosphere or hot salt.

Circle 50 on postcard for more data

Grilles

Transportation Equipment

Extruded Door Sections

When aluminum is part of your product

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If your product demands aluminum to exact specifications—and you're not getting it —call on Anaconda! Custom production, combining precision control of the most modern equipment available with the craftsmanship of aluminum experts, assures you that Anaconda Aluminum always matches your product specifications precisely. And the flexibility of our modern plant facilities gives your orders fast action, prompt shipment.

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Circle 276 on Incuiry Card, for more Data

What Causes Smog

(Continued from page 351)

bon monoxide and nitrogen oxides.

3. The suspicion that automobile exhaust contains compounds that may induce lung cancer.

These complaints pose exhaust control problems that are not identical with the automobile exhaust problems we are dealing with in our efforts to control photochemical smog (Los Angeles' eye irritation, high ozone concentrations, blurred visibility, plant damage, etc.).

To a moderate extent, of course, the two different sets of problems seem to have two points in common. First, the smoke-odor complaint is mainly a Diesel-engine problem, but smoke from either Diesels or spark-ignited engines (automobiles) is largely a function of engine condition, and we have said we have occasionally found engines in such a condition that they did not produce a smog-reactive exhaust mixture, but the unknown trick is how to keep them in that condition. Second, carbon monoxide could be eliminated by any afterburner that successfully eliminated all hydrocarbons.

While a successful nitric oxide eliminator would do away with smog as we know it in Los Angeles, such a solution would quiet few air pollution complaints elsewhere because nitric oxide is a factor only in photochemical smog.

Cancer fears have been based on the fact that benzpyrene (a known carcinogen) has been found in auto exhaust smoke. Consequently, smoke elimination should be an adequate solution. On the other hand, how people in coal-burning communities can become excited about benzpyrene in automobile exhaust is a puzzle, inasmuch as the benzpyrene concentration in coal smoke is many times that in automobile exhaust.

Regardless of the answer to this question, the fact is that the automobile exhaust problem in Los Angeles is considerably different from exhaust problems elsewhere. Accordingly, the solution that will finally be accepted in Los Angeles

Circle 278 on Inquiry Card, for more Data

and for the West Coast may not apply in other communities.

We feel quite confident that the automobile exhaust problem will be solved and that smog, as presently known in Los Angeles county, will disappear. Other counties in Southern California will also benefit from auto exhaust control, but not so much as Los Angeles county until their local sources of excessive smoke and dust have been abated. This does not mean that control districts in other counties should blindly adopt the Los Angeles County Air Pollution Control District Rules and Regulations in toto. A case in point would be indiscriminate control of hydrocarbon evaporation losses. Unless the vapors in question were highly olefinic they could not partake in the smog reaction. ■

The foregoing article is an abstract of a paper delivered by the author to the Trustees and Contributors of the Air Pollution Foundation at the Foundation's Fifth Annual Luncheon Meeting held in Los Angeles.

DIRECTORY OF MANUFACTURERS

(Continued from page 263)

INTEGRAL BUSES

For details of their products see pages 130-131.

CROWN Coach Corp., Los Angeles 21, Calif.
FLXIBLE Co., Coach Div., Loudonville, Ohio.
FLXIBLE-TWIN COACH, see Flxible Co.
GMC Truck & Coach Div., General Motors Corp., Pontiac 11, Mich.
MACK Trucks Inc., Plainfield, N. J.
SOUTHERN COACH Mfg. Co., Inc., Evergreen, Ala.

WHEEL TRACTORS

For details of their products see pages 132-137.

ALLIS-CHALMERS Mfg. Co., Milwaukee 1, Wis.
BROCKWAY Tractor Co., Chagrin Falls, Ohio.
J. I. CASE Co., Racine, Wis.
CATERPILLAR Tractor Co., Peoria 8, Ill.
Clark Equipment Co., Contractors Machinery Div., Benton Harbor, Mich.
COCKSHUT Farm Equipment Ltd., Brantford, Canada.
JOHN DEERE Waterloo Tractors Works, Deere Mfg. Co., Waterloo, Iowa.
FERGUSON, see Massey-Ferguson, Inc.
Tractor & Implement Div., FORD Motor Co., Birmingham, Mich.
INTERNATIONAL Harvester Co., Chicago 1, Ill.
MASSEY-FERGUSON, Inc., Detroit 32, Mich.
McCORMICK, see International Harvester Co.
MICHIGAN, see Clark Equipment Co.
MINNEAPOLIS-MOLINE Co., Hopkins, Minn.
OLIVER Corp., Charles City, Iowa.
R. H. SHEPPARD CO., Inc., Hanover, Pa.
TIGER Tractor Corp., Keyser, W. Va.

GASOLINE ENGINES

For details of their products see pages 174-183.

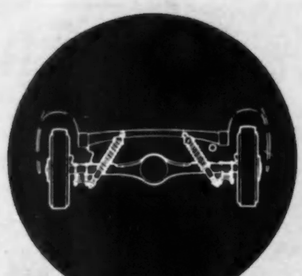
ALLIS-CHALMERS Mfg. Co., Milwaukee 1, Wis.
ARNOLT Corp., Warsaw, Ind.
Burmeister & Wain American Corp., Mystic, Conn.
BRENNAN Motor Mfg. Co., Syracuse 2, N. Y.
CHEVROLET Motor Div., General Motors Corp., Detroit 2, Mich.
CHRIS-CRAFT Corp., Algonac, Mich.
CHRYSLER Corp., Marine & Industrial Engine Div., Detroit 21, Mich.
CLIMAX Engine Mfg. Co., Clinton, Iowa.
CONTINENTAL Motors Corp., Muskegon, Mich.
CRUSADER Marine Div., Cal Connell Cadillac Corp., Warren, Mich.
Dearborn Marine Engines, Inc., Royal Oak 4, Mich.
DODGE Division, Chrysler Corp., Detroit 31, Mich.
FLAGSHIP Marine Engines, Inc., Baltimore 22, Md.
FORD Motor Co., Dearborn, Mich.
GMC Truck & Coach Div., General Motors Corp., Pontiac 11, Mich.
GRAY MARINE Motor Co., Detroit 7, Mich.
HERCULES Motors Corp., Canton 2, Ohio.
HERCULES-HALL-SCOTT, see Hercules Motors Corp.
INTERCEPTOR, see Dearborn Marine Engines, Inc.
INTERNATIONAL Harvester Co., Construction Equipment Div., Melrose Park, Ill.

(Turn to page 358, please)

LOAD-LEVELERS*

—Monroe stabilizing units with built-in ride control for a level ride under all road and load conditions

- ✓ **Do the work of elaborate suspension systems —at a fraction of the price.**
- ✓ **Prevent "tail drag", side sway, and "bottoming" on axles.**
- ✓ **Prevent hard steering and excessive tire wear.**
- ✓ **Require no service, and don't interfere with under-body servicing.**
- ✓ **Easily installed as optional equipment at factory or car dealers.**



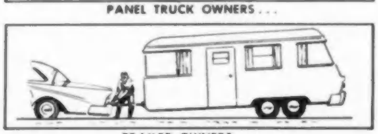
TYPICAL INSTALLATION: Monroe Load-Levelers are installed in exactly the same position and on the same mountings as the rear shock absorbers. They automatically compensate for all road and load conditions, provide maximum stability.

Here is the market—

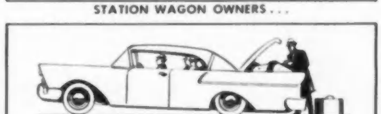
PANEL TRUCK OWNERS . . .

STATION WAGON OWNERS . . .

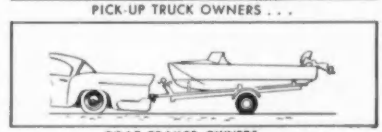
PICK-UP TRUCK OWNERS . . .



TRAILER OWNERS . . .



SALESMEN . . . TRAVELERS . . .



BOAT TRAILER OWNERS . . .

MONROE *World's largest maker of ride control products*

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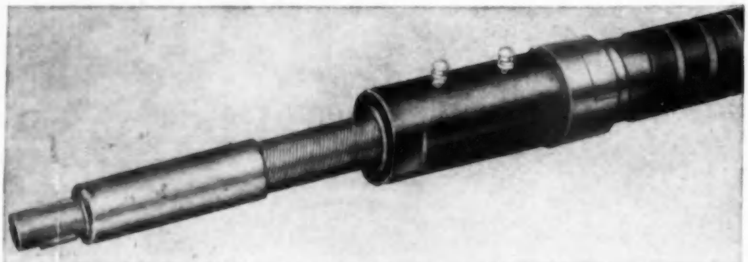
Circle 280 on Inquiry Card, for more Data

HOW TO SELECT
FLEXIBLE SHAFTING FOR POWER DRIVE APPLICATIONS



1¼-inch STOW Power Drive flexible shaft with core assembly pulled out of casing.

For Power Drive applications, the following factors must be considered:

1. **Torque (Lb. In.)** to be transmitted (The starting torque should be used in making selections.)

2. **Operating Speeds (RPM)** — If the maximum speed is higher than the rated speed, torque ratings in the table below do not apply. To find the torque capacity for flexible shafts operating at speeds higher than the rated speeds, multiply the maximum dynamic torque capacity by the rated speed, and then divide by the operating speed. (See example.)

3. **Operating Radius** — In making the selection from the table below, the radius of the smallest band in the flexible shaft should be used.

Ratings — The ratings for flexible shafts shown in the table below apply under the following conditions:

1. when the flexible shaft is adequately supported by clamps along its length. (For unsupported shafts, multiply the calculated torque by a safety factor of 1.6—see example below.)

2. when the flexible shaft is operated in the wind-up direction, which tends to tighten the outer layer of wires. (Flexible shafts operated in the unwind direction will transmit only about 60% of the rated torque.)

3. when the flexible shaft is in continuous operation. Note: **the ratings are based on temperature rise. When the operation is intermittent, the ratings in the table may be exceeded. Consult Stow engineers for specific recommendations.**

RATED SPEED R.P.M.	MAXIMUM DYNAMIC TORQUE CAPACITY (LB. IN.) STRAIGHT AND CURVED SHAFTS RADIUS OF CURVATURE IN INCHES									Wgt./C. Ft.	Core Dia.	Core No. and Type	Shaft Size
	50 to Strgt.	25	20	15	12	10	8	6	5				
4,500	2.4	2.2	2.0	2.0	1.92	1.9	1.7	1.5	1.25	3.0	.124/.128	2049 MH	13
3,800	7.0	6.4	6.0	5.8	5.4	5.0	4.6	3.6	2.0	4.5	.148/.152	2081 MH	15
2,900	9.4	8.6	8.0	7.6	7.0	6.6	6.0	4.8	3.4	7.0	.185/.189	5108 MH	19
2,500	22.0	20.0	18.8	17.6	16.0	15.0	12.6	10.8	9.0	12.5	.247/.252	8924 MH	25
1,800	30.0	28.0	26.4	25.0	23.0	21.0	18.0	14.0		20.0	.308/.313	8925 MH	31
1,800	33.8	31.5	29.7	28.1	25.9	23.6	20.2	15.8		20.0	.308/.313	8969 T	31
1,800	36.0	33.0	31.6	30.0	28.0	26.0	22.0	18.0	11.0	21.0	.324/.329	2034 A	31
1,500	80.0	66.0	63.0	58.0	51.0	46.0	37.0	22.0		28.5	.368/.374	2035 A	38
1,500	60.0	54.0	50.0	46.0	42.0	38.0	30.0	24.0		29.0	.387/.393	8970 MH	40
1,500	90.0	81.0	75.0	69.0	63.0	57.0	45.0	36.0		29.0	.387/.393	8971 T	40
1,150	136.0	110.0	104.0	94.0	80.0	72.0	56.0			50.5	.497/.503	8999 A	50
1,150	148	124	110	92	72	56				53.5	.505/.511	6940 T	50
900	248	200	176	124	84					78.5	.610/.618	6997 T	63
900	220	204	192	180	152	130				80.5	.630/.638	7731 A	63
750	340	224	156	76						117	.747/.753	2056 T	75
600	760	520	420							205	.998/1.004	2057 T	100
440	1,500	720								343	1.298/1.304	2058 T	125

EXAMPLE—How to use the table:
The problem is to transmit ½ H P at 1700 RPM through an unsupported flexible shaft in a 25" radius, estimated starting torque 150% of normal operating torque.

1. Calc. Torque (lb. in.) —
$$\frac{HP \times 63000}{RPM} = \frac{.5 \times 63000}{1700} = 18.5$$

2. Correction factor for starting torque $1.5 \times 18.5 = 27.75$

3. Correction factor for unsupported shaft $27.75 \times 1.6 = 44.4$ lb. in.

4. Refer to Table above. Read downward in column under 25" radius until you find a core having a rating of at least 44.4 lb. in. In this case we find that core No. 8970 is rated 54 lb. in. at 1500 RPM. Since the given speed is 1700 RPM, multiply 54 by 1500 and divide by 1700. $54 \times 1500 \div 1700 = 47.6$ lb. in. (rated torque at 1700 RPM). Therefore, Core No. 8970 is correct.

For Engineering Bulletin No. 570 and a free torque calculator, write

STOW

STOW MANUFACTURING COMPANY

393 Shear Street Binghamton, New York

DIRECTORY OF MANUFACTURERS

(Continued from page 356)

LATHROP, see Burmeister & Wain American Corp.
MACK Trucks Inc., Plainfield, N. J.
MINNEAPOLIS-MOLINE Co., Minneapolis 1, Minn.
NORSEMAN Marine, Oshkosh, Wis.
OLIVER Corp., Charles City, Iowa.
PALMER Engine Co., Cos Cob, Conn.
RED WING Marine Corp., Red Wing, Minn.
REO Div., The White Motor Co., Lansing 20, Mich.
ROI LINE, see Waukesha Motor Co.
STERLING Engine Co., Inc., Menominee, Mich.
STUDEBAKER-Packard Corp., South Bend 27, Mich.
UNIVERSAL Motor Co., Oshkosh, Wis.
WAUKESHA Motor Co., Waukesha, Wis.
WILLYS Motor Corp., Milwaukee 46,
WILLYS Motors, Inc., Toledo 1, Ohio.
WISCONSIN Motor Corp., Milwaukee 46, Wis.
WITTE Engine Works, Oil Well Supply Div., United States Steel Corp., Kansas City 26, Mo.

DIESEL ENGINES

For details of their products see pages 184-191.

ALLIS-CHALMERS Mfg. Co., Milwaukee 1, Wis.
ATLAS, see White Diesel Engine Div., White Motor Co.
CATERPILLAR Tractor Co., Peoria, Ill.
CERLIST Diesel, Inc., Burlington, N. C.
CONTINENTAL Motors Corp., Muskegon 82, Mich.
CUMMINS Engine Co., Inc., Columbus, Ind.
Curtiss-Wright Corp., Utica Div., Utica, Mich.
Detroit Diesel Engine Div., General Motors Corp., Detroit 28, Mich.
DEUTZ, see Diesel Energy Corp.
Diesel Energy Corp., New York 5, N. Y.
FAIRBANKS, MORSE & Co., Chicago 5, Ill.
FORD Motor Co., Dearborn, Mich.
GENERAL MOTORS, see Detroit Diesel Eng. Div.
GRAY MARINE Motor Co., Detroit 7, Mich.
Harnischfeger Corp., Diesel Div., Crystal Lake, Ill.
HERCULES Motors Corp., Canton 2, Ohio.
INTERNATIONAL Harvester Co., Construction Equipment Div., Melrose Park, Ill.
JLD, see Hercules Motors Corp.
MACK Trucks, Inc., Plainfield, N. J.
MERCEDES-BENZ, see Curtiss-Wright Corp.
MINNEAPOLIS-MOLINE CO., Minneapolis 1, Minn.
MURPHY Diesel Co., Milwaukee 19, Wis.
OLIVER Corp., Charles City, Iowa.
D. W. ONAN and Sons, Inc., Minneapolis 14, Minn.
P&H, see Harnischfeger Corp., Diesel Div.
RED WING Marine Corp., Red Wing, Minn.
R. H. SHEPPARD Co., Inc., Hanover, Pa.
STERLING Engine Co., Inc., Menominee, Mich.
SUPERIOR, see White Diesel Engine Div., White Motor Co.
WAUKESHA Motor Co., Waukesha, Wis.
White Diesel Engine Div., White Motor Co., Springfield 99, Ohio.
WITTE Engine Works, Oil Well Supply Div., United States Steel Corp., Kansas City 26, Mo.

(Turn to page 360, please)

DIRECTORY OF MANUFACTURERS

(*Continued from page 358*)

SMALL GASOLINE ENGINES

For details of their products see pages 192-193.

BRIGGS & STRATTON Corp., Milwaukee 1, Wis.
CLINTON Engines Corp., Maquoketa, Iowa.
CONTINENTAL Motors Corp., Detroit 14, Mich.
CUSHMAN Motor Works, Inc., Lincoln 1, Neb.
GLADDEN Products Corp., Glendale 3, Calif.
GRAVELY Tractors, Inc., Dunbar, W. Va.
Hercules Motors Corp., Canton 2, Ohio.
HOMELITE Div., Textron, Inc., Port Chester, N. Y.
JACOBSEN Mfg. Co., Racine, Wis.
JLO-HERCULES, see Hercules Motor Corp.
KOHLER Co., Kohler, Wis.
LAUSON-Power Products Parts Depot, Tecumseh Products Co., Grafton, Wis.
McCULLOCH Corp., Los Angeles 45, Calif.
MUSTANG Motors Products Corp., Glendale 3, Calif.
D. W. ONAN & Sons, Inc., Minneapolis 14, Minn.
POWER PRODUCTS, see Lauson-Power Products Depot, Tecumseh Products Co.
WEST BEND Aluminum Co., Hartford Div., Hartford, Wis.
WISCONSIN Motor Corp., Milwaukee 46, Wis.

OUTBOARD MOTORS

For details of their products see pages 194-195.

BUCCANEER, see Gale Products Div., Outboard Marine Corp.
ELGIN, see West Bend Aluminum Co., Hartford Div.
E V IN R U D E Motors Div., Outboard Marine Corp., Milwaukee 16, Wis.
FLAMBEAU, see Metal Products Corp.
JOHNSON Motors Div., Outboard Marine Corp., Waukegan, Ill.
Gale Products Div., Outboard Marine Corp., Galesburg, Ill.
Kiekhaefer Corp., Fond du Lac, Wis.
McCulloch Corp., Minneapolis, Minn.
MERCURY, see Kiekhaefer Corp.
Metal Products Corp., Milwaukee 12, Wis.
Muncie Gear Works, Inc., Muncie, Ind.
NEPTUNE, see Muncie Gear Works, Inc.
OLIVER Outboard Motors Div., Oliver Corp., Battle Creek, Mich.
SCOTT, see McCulloch Corp.
WEST BEND Aluminum Co., Hartford Div., Hartford, Wis.

DIESEL ENGINES FOR DIESEL-ELECTRIC LOCOMOTIVES

For details of their products see page 195.

ALCO Products, Inc., Schenectady 5, N. Y.
COOPER-BESSEMER Corp., Mt. Vernon, Ohio.
ELECTRO-MOTIVE Div., General Motors Corp., La Grange, Ill.
FAIRBANKS, MORSE & Co., Chicago 5, Ill.

AIRCRAFT GAS TURBINES

For details of their products see pages 220-223.

UNITED STATES

ALLISON Div., General Motors Corp., Indianapolis 6, Ind.
BOEING Airplane Co., Industrial Products Div., Seattle 24, Wash.

CONTINENTAL Aviation & Engineering Corp., Detroit 15, Mich.
FAIRCHILD Engine Div., Fairchild Engine & Airplane Corp., Deer Park, L. I., N. Y.
GENERAL ELECTRIC Co., Aircraft Gas Turbine Div., Cincinnati 15, Ohio.
LYCOMING Div., Avco Mfg. Corp., Stratford, Conn.
PRATT & WHITNEY Aircraft Div. of United Aircraft Corp., East Hartford 8, Conn.
WESTINGHOUSE Electric Corp., Aviation Gas Turbine Div., Kansas City, Mo.
WRIGHT Aeronautical Div., Curtiss-Wright Corp., Wood-Ridge, N. J.

CANADA

IROQUOIS, see Orenda Engines, Ltd.
Orenda Engines, Ltd., Toronto, Canada.

FRANCE

General Aeronautique Marcel DASSAULT, Saint-Cloud, France.
Societe d'Exploitation des Materials HISPANO-Suiza, Bois-Colombes, Seine, France.
Societe Nationale d'Etude et de Construction de Moteurs d'Aviation (S.N.E.C.M.A.), Paris 8, France.
Societe Anonyme TURBOMECA, Bordes, France.

GREAT BRITAIN

ARMSTRONG SIDDELEY Motors Ltd., Coventry, England.
BLACKBURN & General Aircraft, Ltd., Brough, East Yorks, England.
BRISTOL Aero-Engines Ltd., Filton House, Bristol, England.
DE HAVILLAND Eng. Co., Ltd., Leavesden, Hertfordshire, England.
D. NAPIER & Son, Ltd., Acton, London W.3, England.
ROLLS-ROYCE, Ltd., Aero Engine Div., Derby, England.

U. S. AIRCRAFT ENGINES RECIPROCATING TYPE

For details of their products see pages 224-225.

Aircooled Motors, Inc., Syracuse 8, N. Y.
CONTINENTAL Motors Corp., Aircraft Engine Div., Muskegon, Mich.
FRANKLIN, see Aircooled Motors, Inc.
HERRMANN Engineering Co., Glendale 1, Calif.
LYCOMING Div., Avco Manufacturing Corp., Williamsport, Pa.
PRATT & WHITNEY Aircraft, Div. United Aircraft Corp., East Hartford 8, Conn.
WRIGHT Aeronautical Div., Curtiss-Wright Corp., Wood-Ridge, N. J.

U. S. CIVIL AND MILITARY AIRCRAFT

For details of their products see pages 226-227, 232-233.

ACME, see Aircraft Marine Engineering Corp.
Aircraft Marine Engineering Corp., Van Nuys, Calif.
BEE AVIATION Associates, Inc., San Diego 9, Calif.
BEECH Aircraft Corp., Wichita 1, Kan.
BOEING Airplane Co., Seattle 24, Wash.
CALLAIR, Afton, Wyo.
CESSNA Aircraft Co., Wichita, Kan.
CHAMPION Aircraft Corp., Osceola, Wis.
CHANCE VOUGHT Aircraft, Inc., Div. United Aircraft Corp., Dallas, Tex.
COLONIAL Aircraft Corp., Sanford, Me.
CONVAIR Div., General Dynamics Corp., San Diego 12, Calif.
DOUGLAS Aircraft Co., Inc., Santa Monica, Calif.
FAIRCHILD Aircraft Div., Fairchild Engine & Airplane Corp., Hagerstown, Md.
FLETCHER Aviation Corp., Rosemead, Calif.
GOODYEAR Aircraft Corp., Akron 15, Ohio.

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DIRECTORY OF MANUFACTURERS

(*Continued from page 361*)

GRUMMAN Aircraft Engineering Corp., Bethpage, L. I., N. Y.
LOCKHEED Aircraft Corp., Burbank, Calif.
MARTIN Co., Baltimore 3, Md.
McDONNELL Aircraft Corp., St. Louis 3, Mo.
MOONEY Aircraft, Inc., Kerville, Tex.
MORRISEY Aviation, Inc., Santa Ana, Calif.
NORTH AMERICAN Aviation, Inc., Los Angeles 45, Calif.
NORTHROP Aircraft, Inc., Hawthorne, Calif.
PIPER Aircraft Corp., Lock Haven, Pa.
REPUBLIC Aviation Corp., Farmingdale, L. I., N. Y.
STITS Aircraft, Riverside, Calif.
TAYLORCRAFT, Inc., Conway, Pa.
TEMCO Aircraft Corp., Dallas 22, Tex.
TRANSLAND Aircraft Div., Hi-Shear Rivet Tool Co., Los Angeles 45, Calif.
TRECKER Aircraft Corp., Milwaukee 14, Wis.

FOREIGN CIVIL AND MILITARY AIRCRAFT

For details of their products see pages 227-229, 233-234.

AUSTRALIA

DE HAVILLAND, see de Havilland Aircraft Co., Ltd., listing under Great Britain.

BELGIUM

AVIONS FAIREY S.A., Gosselies, Belgium.

CANADA

CANADAIR, Ltd., Montreal, Quebec.
DE HAVILLAND, see de Havilland Aircraft Co., Ltd., listing under Great Britain.

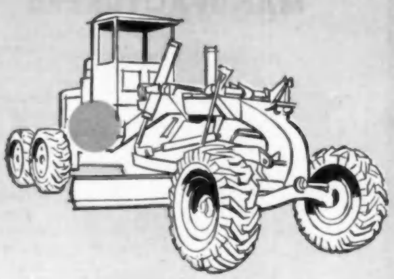
FRANCE

Societe Anonyme des Ateliers d'Aviation, Louis BREGUET, Paris 16, France.
Generale Aeronautique Marcel DASSAULT, Saint-Cloud, France.
FOUGA, see Potez-Air Fouga.
Avions Max HOLSTE, Reims, France.
MORANE-SAULNIER, Seine, France.
Potez-Air Fouga, Paris 16, France.
NORD Aviation, Societe Nationale de Constructions Aeronautiques, Chatillon, France.
SUD AVIATION, Societe Nationale de Constructions Aeronautiques, Paris 16, France.

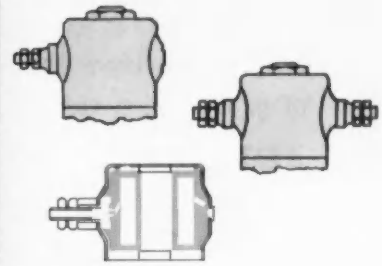
GREAT BRITAIN

Sir W. G. ARMSTRONG WHITWORTH Aircraft, Ltd., Coventry, Warwickshire, Eng.
AVRO, see A. V. Roe & Co., Ltd.
A. V. Roe & Co., Ltd., Middleton, Manchester, Eng.
BLACKBURN & General Aircraft Ltd., Brough, East Yorks, Eng.
BRISTOL Aeroplane Co., Ltd., Filton House, Bristol, Eng.
DE HAVILLAND Aircraft Co., Ltd., Hatfield, Hertfordshire, Eng.
ENGLISH ELECTRIC Co., Ltd., Warton Aerodrome, Eng.
FAIREY Aviation Co., Ltd., London W.1, England.
FOLLAND Aircraft, Ltd., Hamble, Southampton, England.
GLOSTER Aircraft Co., Ltd., Gloucester, Eng.
HANDLEY PAGE Ltd., Cricklewood, London, N.W.2, Eng.
HAWKER Aircraft, Ltd., Surrey, Eng.

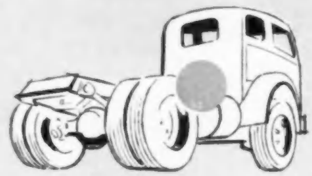
(*Turn to page 364, please*)



Automatic diesel governor control. To improve brake life and save fuel this motor grader uses a Skinner V5, three-way, normally open solenoid valve to relieve pressure in the hydraulic actuated engine governor. When the brakes are applied, the valve is energized by a pressure switch on the master cylinder causing the valve to close and bypass oil from the governor cylinder which reduces the pressure and throttles the engine.

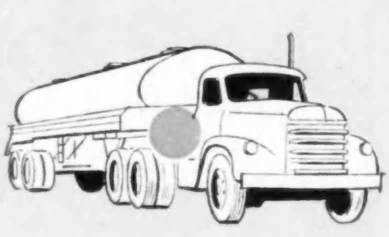


Skinner solenoid valves are available with single or double automotive terminals; specially designed automotive housings with potted coils (coil, housing leads and flux plate are potted with a compound to make them vibration-proof and moisture resistant); and waterproof molded coils that operate in all types of weather, under the severest conditions—even under water.



Saddle tank operation. Energized by a standard dash-mounted toggle switch, a Skinner valve makes fuel level readings and tank switching a one-step, push-button operation. Valve reduces accident hazard by preventing driver's attention from being diverted; saves on labor and materials by eliminating fuel piping.

Additional features of Skinner automotive valves include: stainless steel internal parts; soft synthetic, long-lasting inserts that provide bubbletight sealing; spring-loaded plungers; mounting in any position; orifice seats with radius with well-rounded contact area and high finish for long insert life. All valves are built to the highest UL standards for the convenience and safety of the automotive industry.



Propane and butane fuel cut-off. On trucks using liquid propane or butane fuel, Skinner V61 solenoid valves are used as a safety device to automatically shut off the tanks from the fuel system when the vehicle is not in operation. The valve is installed on the line ahead of the vaporizing unit and is energized by the ignition switch. Skinner valves for this application are approved by the Underwriters' Laboratories.

Skinner solenoid valves help solve automotive problems like these

SKINNER SOLENOID VALVES ARE DISTRIBUTED NATIONALLY. For complete information, contact a Skinner Representative listed in the Yellow Pages or write us at Dept. 333.

SKINNER ELECTRIC VALVES ®

SKINNER ELECTRIC VALVE DIVISION
NEW BRITAIN CONNECTICUT
105 EDGEWOOD AVENUE

THE CREST OF QUALITY

DIRECTORY OF MANUFACTURERS

(Continued from page 362)

HUNTING Aircraft Ltd., Luton Airport, Bedfordshire, Eng.
SAUNDERS-ROE, Ltd., Osborne, East Cowes, Isle of Wight, Eng.
SCOTTISH AVIATION, Ltd., Prestwick Airport, Ayrshire, Scotland.
SHORT Brothers & Harland Ltd., Queens Island, Belfast, Ireland.
VICKERS - ARMSTRONGS (Aircraft) Ltd., Weybridge, Surrey, Eng.

ITALY

AERonautica MACCHI S.P.A., Varese, Italy.
FIAT Societa per Azioni, Torino, Italy.
NARDI, Soc. An. Per Costruzioni Aeronautiche, Milano, Italy.
PIAGGIO & C. Soc. p. Azioni, Genova, Italy.

SPAIN

Construcciones Aeronauticas, S.A., (C.A.S.A.), Madrid, Spain.
La HISPANO-Aviacion S.A., Madrid, Spain.

SWEDEN

Svenska Aeroplan Aktiebolaget (SAAB), Linkoping, Sweden.

U. S. AND FOREIGN WING AIRCRAFT

For details of their products see page 230-231.

UNITED STATES

BELL Helicopter Corp., Fort Worth 1, Tex.
BENSEN Aircraft Corp., Raleigh, N. C.
BRANTLY Helicopter Corp., Frederick, Okla.
CESSNA Aircraft Co., Wichita, Kan.
CONVERTAWINGS, Inc., Amityville, L. I., N. Y.
DOMAN Helicopters, Inc., Danbury, Conn.
GOODYEAR Aircraft Corp., Akron 15, Ohio.
GYRODYNE Co. of America, Inc., St. James, L. I., N. Y.
HILLER Aircraft Corp., Palo Alto, Calif.
HUGHES Tool Co., Aircraft Div., Culver City, Calif.
KAMAN Aircraft Corp., Bloomfield, Conn.
McDONNELL Aircraft Corp., St. Louis 66, Mo.
OMEGA Aircraft Corp., New Bedford, Mass.
PIASECKI Aircraft Corp., Philadelphia 42, Penna.
REPUBLIC Aviation Corp., Helicopter Div., Farmingdale, L. I., N. Y.
SIKORSKY Aircraft Div., United Aircraft Corp., Bridgeport 1, Conn.
VERTOL Aircraft Corp., Morton, Pa.

FRANCE

SUD-AVIATION, Societe Nationale de Constructions Aeronautiques, Paris 16, France.

GREAT BRITAIN

BRISTOL Aeroplane Co., Ltd., Filton House, Bristol, Eng.
FAIREY Aviation Co., Ltd., London W.1, Eng.
SAUNDERS-ROE, Ltd., Osborne, East Cowes, Isle of Wight, Eng.
WESTLAND Aircraft, Ltd., Yoevil, Eng.

HEAVY-DUTY AND OFF-HIGHWAY TRUCKS

For details of their products see pages 252-255.

CRANE CARRIER Corp., Tulsa, Okla.

DODGE Div., Chrysler Corp., Detroit 31, Mich.
DUPLEX Div., Warner & Swasey Co., Lansing 4, Mich.
EUCLID Div., General Motors Corp., Cleveland 17, Ohio.
FABCO, see F. A. B. Mfg. Co.
FABCO, see F.A.B. Mfg. Co.
F.A.B. Mfg. Co., Oakland 8, Calif.
FEDERAL Motor Truck Co., Detroit 9, Mich.
FORD Div., Ford Motor Co., Dearborn, Mich.
Four Wheel Drive Auto Co., Clintonville, Wis.
FWD, see Four Wheel Drive Auto Co.
GMC Truck & Coach Div., General Motors Corp., Pontiac 11, Mich.
INTERNATIONAL Harvester Co., Chicago 1, Ill.
KENWORTH Motor Truck Co., Seattle 24, Wash.
KW-DART Truck Co., Kansas City 8, Mo.
MACK Trucks, Inc., Plainfield, N. J.
MARMON-HERRINGTON Co., Inc., Indianapolis 7, Ind.
OSHKOSH Motor Truck Inc., Oshkosh, Wis.
PETERBILT Motors Co., Oakland 5, Calif.
REO Div., White Motor Co., Lansing 20, Mich.
TRUCKSTELL Mfg. Co., Cleveland 14, Ohio.
WALTER Motor Truck Co., Ridgewood, L. I., N. Y.
WARD LA FRANCE Truck Corp., Elmira Heights, N. Y.

INTEGRAL FRONT-END LOADERS (SHOVEL)

For details of their products see pages 256-257.
ALLIS-CHALMERS Mfg. Co., Milwaukee 1, Wis.
J. I. CASE Co., Racine, Wis.
CATERPILLAR Tractor Co., Peoria 8, Ill.
Clark Equipment Co., Construction Machinery Div., Chicago 1, Ill.
EIMCO Corp., Salt Lake City, Utah.
EUCLID Div., General Motors Corp., Cleveland 17, Ohio.
FORD Motor Co., Tractor and Implement Div., Birmingham, Mich.
Frank G. Hough Co., Libertyville, Ill.
INTERNATIONAL-DROTT, see International Harvester Co.
International Harvester Co., Melrose Park, Ill.
MICHIGAN, see Clark Equipment Co.
Mixermobile Manufacturers, Inc., Portland 20, Ore.
OLIVER Corp., Cleveland 17, Ohio.
PAYLOADER, see Frank G. Hough Co.
Pettibone-Mulliken Corp., Chicago 51, Ill.
PETTIBONE SPEEDALL, see Pettibone-Mulliken Corp.
SCOOPMOBILE, see Mixermobile Manufacturers, Inc.
TRACTOMOTIVE Corp., Deerfield, Ill.
TROJAN, see Yale & Towne Mfg. Co.
Yale & Towne Mfg. Co., Trojan Div., Batavia, N. Y.

DUMPERS—REAR, BOTTOM, FRONT

For details of their products see page 257.
ALLIS-CHALMERS Mfg. Co., Milwaukee 1, Wis.
Clark Equipment Co., Construction Machinery Div., Chicago 1, Ill.
CURTISS-WRIGHT Corp., South Bend Div., South Bend 23, Ind.
EUCLID Div., General Motors Corp., Cleveland 17, Ohio.
KOEHRING Co., Milwaukee 16, Wis.
LE TOURNEAU-WESTINGHOUSE Co., Peoria, Ill.
MICHIGAN, see Clark Equipment Co.
Yuba Mfg. Co., Benicia, Calif.
YUBA-MOVALL, see Yuba Mfg. Co.

(*Turn to page 366, please*)

DIRECTORY OF MANUFACTURERS

(Continued from page 365)

MICHIGAN, see Clark Equipment Co.
OLIVER Corp., Cleveland 17, Ohio.
SEAMAN-GUNNISON Corp., Milwaukee 15, Wis.

POWERED ROLLERS

For details of their products, see pages 258-259.

Acme Iron Works, San Antonio 6, Texas.
AUSTIN-WESTERN, Construction Equipment Div., Baldwin-Lima-Hamilton Corp., Aurora, Ill.
BROWNING Mfg. Co., San Antonio 6, Texas.
BUFFALO-SPRINGFIELD Roller Co., Div. Koehring Co., Springfield, Ohio.
C. H. & E. Mfg. Co., Milwaukee 12, Wis.
FERGUSON, see Shovel Supply Co.
GALION Iron Works & Mfg. Co., Galion, Ohio.
HUBER-WARCO Co., Marion, Ohio.
INGRAM, see Acme Iron Works.
SEAMAN-GUNNISON Corp., Milwaukee 15, Wis.
Shovel Supply Co., Dallas, Texas.
TAMPO Mfg. Co., San Antonio 7, Texas.

CRAWLER TRACTORS

For details of their products see page 260.

ALLIS-CHALMERS Mfg. Co., Milwaukee 1, Wis.
J. I. CASE Co., Racine, Wis.
CATERPILLAR Tractor Co., Peoria 8, Ill.
JOHN DEERE Dubuque Tractor Works, Deere Mfg. Co., Dubuque, Iowa.
EIMCO Corp., Salt Lake City 10, Utah.
EUCLID Div., General Motors Corp., Cleveland 17, Ohio.
INTERNATIONAL Harvester Co., Construction Equipment Div., Chicago, Ill.
OLIVER Corp., Cleveland 17, Ohio.

SCRAPERS

For details of their products see page 261.

ALLIS-CHALMERS Mfg. Co., Construction Machinery Div., Milwaukee 1, Wis.
CATERPILLAR Tractor Co., Peoria 8, Ill.
Clark Equipment Co., Construction Machinery Div., Chicago 1, Ill.
CURTISS-WRIGHT Corp., South Bend Div., South Bend 23, Ind.
EUCLID Div., General Motors Corp., Cleveland 17, Ohio.
INTERNATIONAL Harvester Co., Construction Equipment Div., Chicago, Ill.
LE TOURNEAU-WESTINGHOUSE Co., Peoria, Ill.

GRADERS

For details of their products see page 262.

ALLIS-CHALMERS Mfg. Co., Construction Machinery Div., Milwaukee 1, Wis.
AUSTIN-WESTERN Construction Equipment Div., Baldwin-Lima-Hamilton Corp., Aurora, Ill.
CATERPILLAR Tractor Co., Peoria 8, Ill.
GALION Iron Works & Mfg. Co., Galion, Ohio.
HUBER-WARCO Co., Marion, Ohio.
LE TOURNEAU-WESTINGHOUSE Co., Peoria, Ill.
PETTIBONE-Mulliken Corp., Chicago 51, Ill.

THE BUSINESS PULSE

(Continued from page 296)

tual absence of new corporate offerings brought about an increase in the prices of corporate bonds, and this in turn affected prices of longer-term Governments and municipals. Treasury bill yields also eased in the face of vigorous buying on the part of corporations, whose liquidity rose as a consequence of the improving profits situation and the seasonal ebb in credit needs. The Treasury bill market was also buoyed by some $600 million that was freed in Treasury financing operations. This was the difference between cash attrition at the time of the mid-February exchange offering and the $1.5 billion subsequently absorbed by a special offering of tax-anticipation bills. ■

Five-Day "Automobile Week" To Be Held in Detroit by SAE

The Society of Automotive Engineers is combining two national meetings for a five-day "automobile week" March 16-20 in Detroit.

Twenty-four technical papers will be presented at the three-day meeting of the national passenger car, body and materials meeting. Included will be sessions on passenger car exhaust systems, fatigue, electronic body testing and finishes.

The two-day production meeting will highlight eight panel discussions and 12 technical papers. Panel topics covered will include cold forming, metal finishing costs, scheduling and press tooling economies. Papers will cover electronic data processing, sprayed metal coatings and quality.

MEN *in the* NEWS

(Continued from page 65)

Osborn Mfg. Co., Brush Div.—Alfred J. Chandler was appointed vice-president.

Chrysler Corp.—**William C. Cawthon** is the new plant manager of the Plymouth final assembly and body plants, and **Joseph B. Neal** is the new plant manager at Dodge.

Walker Mfg. Co., Commercial Sales Div. — **Robert P. Bekke** has been named sales manager.

International Nickel Co., Inc. — **John Ludwig, Jr.,** is now supervisor of metallurgical services.

L & J Press Corp. — **R. David Mathias** was advanced to vice-president in charge of sales, and **Robert H. Kemp** has been appointed chief engineer.

Bendix Aviation Corp., Products Div.—G. K. Muessel has become manager of the Detroit offices.

Houdaille Industries, Inc., Buffalo Hydraulics Div.—**William J. Seevers** was made director of defense contracts.

Joseph T. Ryerson & Son, Inc. — **Theodore L. Kishbaugh** has been named general manager of the Wallingford, Conn. plant.

Hettrick Mfg. Co.—**Wayne F. Mack** was made director of purchasing.

Dow Chemical Co. — **Fielding H. Yost, Jr.,** has been advanced to assistant to the director of corporate relations.

Rockwell-Standard Corp. — **Ulrich R. Gress** has become general assistant to vice-president in charge of foreign operations and public relations.

(Turn to page 368, please)

MEN *in the* NEWS

(*Continued from page 367*)

Cincinnati Milling Machine Co.—Alfred T. Blackburn was elected vice-president in charge of manufacturing.

Hynes Steel Products Co.—**Michael J. Myers** has been named vice-president in charge of sales.

Chemetron Corp.—**Roy T. Omundson** has been elected a vice-president.

McKiernan-Terry Corp.—**Carl W. Shattuck** was elected president.

Lockheed Aircraft Corp., Georgia Div.—**W. A. Pulver** was named assistant general manager and Arthur E. Flock succeeds him as chief engineer.

Dole Valve Co.—**John Gayton** has been appointed director of marketing.

(*Continued on page 369*)

MEN in the NEWS

(Continued from page 368)

American Chain & Cable Co., Inc.—Wm. B. Ilko is now sales manager of both the American Chain and Wright Hoist Divs.

Chevrolet Motor Div., General Motors Corp.—**Donald H. McPherson** has been appointed staff engineer in charge of engine design.

Delco-Remy Div., General Motors Corp.—**Truman J. Hedding** has been named technical assistant to the general manager.

Allis-Chalmers Mfg. Co.—**Earl R. Narum and Roy E. Goodwill, Jr.**, were appointed manager of automotive industry sales and manager of general industrial sales, respectively, for the Detroit district.

American Brake Shoe Co., Denison Engineering Div.—**Paul W. Norris** has been made president.

National-Standard Co.—**Thomas H. Pearce** has been elected president.

Joseph T. Ryerson & Son, Inc.—**Freeman X. Kinzie, Loren B. Clay,** and **Harry M. Cassel** were named district sales managers at the Los Angeles, Calif., steel service plant.

Kelley-Springfield Tire Co. — **Edmund S. Burke** was elected chairman of the board, and **George B. Newman** succeeds him as president and chief executive officer.

Vickers Inc.—**Jack Newlove** has been promoted to district manager of the El Segundo, Calif., office.

Necrology

Arthur W. Anderson, 63, sales engineer for Borg & Beck Div., Borg-Warner Corp., died Feb. 23, at Chicago, Ill.

Arthur Weber Huff, 54, managing director of Minneapolis-Moline Turk Traktor ve Ziraat Makineleri, died Feb. 21, at Ankara, Turkey.

Edward J. Toepfer, 79, pioneer automaker, died recently at Milwaukee, Wis.

VIBRATION PROOF!

CORBIN SELF-TIGHTENING HOSE CLAMPS

world's largest supplier of self-tightening hose clamps. Corbin Hose Clamp Division, The American Hardware Corporation, New Britain, Connecticut.

CORBIN

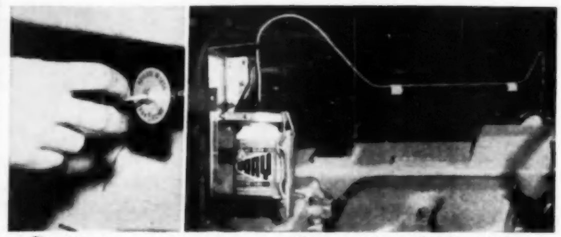
Circle 298 on Inquiry Card, for more Data

PULL THE KNOB AND...

INSTNSTART*

STARTS COLD DIESEL & GASOLINE ENGINES INSTANTLY!

INSTNSTART insures quick starts for cold diesel and gasoline engines all year 'round. (Until an engine reaches normal operating temperature it is a cold engine.) The driver or pilot pulls a knob at his fingertips releasing enough fluid necessary to sustain combustion regardless of weather conditions. INSTNSTART APPLICATORS employ our economical pressurized can of Spray Starting Fluid. This safe, convenient, closed system has been well received in the U. S. and abroad. Quicker starts with INSTNSTART eliminate down-time and prolong engine and electrical system life. It can be installed in minutes with a screwdriver and drill.



*Patent Pending

▲A cover, not shown, protects the mechanism.

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Circle 299 on Inquiry Card, for more Data

Popular package is 8-oz. can fitted with Bakelite cap holding soft-hair brush for applying right at bench; metal surface ready for layout in a few minutes. The dark blue background makes the scribed lines show up in sharp relief, prevents metal glare. Increases efficiency and accuracy.

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THE DYKEM COMPANY
2301-L North 11th St. • St. Louis 6, Mo.

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END NIGHT CLEANUP & MORNING REBLUING

DYKEM HI-SPOT BLUE No. 107 is used to locate high spots when scraping bearing surfaces. As it does not dry, it remains in condition on work indefinitely, saving scraper's time. Intensely blue, smooth paste spreads thin, transfers clearly. No grit; noninjurious to metal. Uniform. Available in collapsible tubes of three sizes. Order from your supplier. Write for free sample tube on company letterhead.

THE DYKEM CO., 2301-L NORTH 11TH ST., ST. LOUIS 6, MO.

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Classified Advertisement

WANTED—DISCONTINUED PACKAGING MATERIALS, Corrugated Boxes, Folding Paper Cartons, Cellophane and Polyethylene Bags, Sheets and Rolls, Wax Paper, and Glassine Paper, Paper Bags and Gummed Tape. Berry Box Co., Inc., 1013 Broadway, Brooklyn 21, N. Y.

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44th Year

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THE G & O MANUFACTURING CO.
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NEW HAVEN CONNECTICUT

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Specify Vellumoid for the finest in gaskets and gasket sets . . . job matched to your specific requirements. Vellumoid now offers Cylinder Head, Manifold, Exhaust Flange Gaskets and Overhaul Sets to assure trouble-free superior performance.

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THE VELLUMOID COMPANY
Worcester, Massachusetts

Circle 303 on Inquiry Card, for more Data

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STOPS THEM ALL!

AMERICAN Brake Shoe COMPANY

AMERICAN BRAKEBLOK DIVISION
P.O. BOX 21, BIRMINGHAM, MICHIGAN

Circle 304 on Inquiry Card, for more Data

Index to

This Advertisers' Index is published as a convenience, care will be taken to index correctly. No allow-

Advertisers

and not as part of the advertising contract. Every
ance will be made for errors or failure to insert.

FREE LITERATURE

Diesel Power 1

An eight page brochure, "New GM Diesel Power for Highway Trucks," describes four engines including three V-type Diesels which are adaptable for any size and style of truck from 20,000 to 75,000 GCW and up. *Detroit Diesel Engine Div., General Motors Corp.*

Treated Felts 2

Information on five treated felts has been released by Western Felt Works. They are WesTemp for high temperature, Teflon Coating for reducing friction, and Thermoplastic Resin Impregnation, Mylar Coating, and Polyethylene Film for abrasion resistance.

Conveyor Equipment 3

Catalog 600 covers a line of patented products and custom built conveyor equipment, including an automatic elevator for handling small parts magnetically, a totally enclosed bulk material handling conveyor and a precision piano hinge steel belt conveyor elevator. *Prab Conveyors, Inc.*

Copper-Base Alloys 4

A detailed listing of the properties, forms and composition of wrought copper and copper-base alloys is available in a 14 page booklet prepared by *Western Brass Sales; Metals Div. Olin Mathieson Chemical Corp.*

Spraying Equipment 5

A catalog illustrating and describing a line of equipment for extruding mastics, protective coatings, sound deadeners, insulating materials, etc., has been issued by *Gray Co., Inc.*

Flexible Shafting 6

F. W. Stewart Corp. has issued a new bulletin on its Circle Ess flexible shafting. It explains briefly the designing of flexible shaft into products having an application which requires control from remote places. Included in the bulletin are the latest specification charts on both remote control and power drive cables plus complete data charts of the Circle Ess casing materials. Uses of adapters for flexible shafting and illustrations of a number of these adapters are also given.

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FREE LITERATURE—*Continued*

Diamond Wheels **7**

A four page brochure gives information about diamond wheels (both natural and man-made diamonds) for carbide grinding. It deals with bond types, infeed and table speeds, wet grinding, etc. *The Carborundum Co.*

Hydraulic Presses **8**

Bulletin 95-D, 12 pages, describes and illustrates the modernized and expanded line of KRW four-column, single-action hydraulic presses. Specifications are given for 48 models ranging in capacities from 25 to 1000 tons. *K. R. Wilson, Inc.*

Tape Controlled Unit **9**

GE tape control Burgmaster six and eight spindle turret drilling, tapping, and boring machines are covered in a 12 page bulletin that tells how to program a part, prepare the tape and operate the machine. *Burg Tool Manufacturing Co., Inc.*

Flexible Coupling **10**

Catalog 67 covers the Ajax pin and rubber cushioned bushing, Series 400 flexible coupling, gives specifications and ratings on the four sizes which accommodate 1¼, 1¾, 2¼ and 2¾ in. maximum bores respectively. *Ajax Flexible Coupling Co., Inc.*

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Automation Machines **11**

A product information folder is available from the Industrial & Automation Div. of Radio Corp. of America that contains descriptions and specifications of a wide variety of "building-block" type automation machines for mechanizing and integrating production and assembly operations.

Explosive Products **12**

A line of explosive ordnance products—explosive bolts, gas generators, pressure cartridges, igniters and other devices are discussed in a technical data book prepared by *McCormick Selph Associates.*

Numerical Control **13**

A 32 page bulletin explaining the principles and application of Inductosyn numerical control systems has been published by *Farrand Controls, Inc.*

Handling Conveyors **14**

Detailed information on models 540 and 610, light-duty power belt conveyors is available in two separate bulletins (540 and 610). *The Oliver Corp., A. B. Farquhar Div.*

Millivoltmeters **15**

Catalog C10-1, 28 pages, covers operating principles, specifications and features on non-control and control millivoltmeters for indicating, controlling and safety cut off. *Minneapolis-Honeywell Regulator Co.*

Coated Steel Sheet **16**

United States Steel Corp. has prepared an eight page color brochure which describes vinyl coated steel sheet for automotive applications. The plastic-on-steel application involves curing and bonding of liquid vinyl plastisols to sheets and coils—either cold rolled or galvanized in a continuous coating process. Prior to cooling, the coating can be embossed with any texture that can be engraved on a printing roll.

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Industrial Trucks 17

The Automatic Transportation Co. has published an industrial truck selector guide. Over 150 models to fit many requirements are illustrated in this 20 page booklet.

Disc Grinding 18

Bulletin DH4, eight pages, gives vital data on the DH4 double horizontal spindle disc grinder which is designed to handle parts such as bearing races, piston rings, and gear blanks. *Besley-Welles Corp.*

Gear Finisher 19

Two page Bulletin 870-C-58 describes how the 870-C internal gear finisher is used for either conventional transverse or plunge shaving of internal gears. *Michigan Tool Co.*

Phosnic Bronze 20

Phosnic bronze, a high copper alloy that combines to an unusual degree of high strength and high electrical and thermal conductivity, is described in a booklet published by *Chase Brass & Copper Co., Inc.*

Mill Products 21

An 18 page brochure gives complete specifications for the hundreds of alloys and forms of aluminum mill products available from the *Reynolds Metals Co.*

Carbide Tools 22

Catalog MT-059, 40 pages, gives complete data and prices for solid carbide; standard blanks, indexible "throw-away" inserts, on-end inserts, etc. *Willey's Carbide Tool Co.*

Aluminum Extrusions 23

A detailed 16 page brochure covering the design and production of heavy press aluminum extrusions has been prepared by *Harvey Aluminum.*

(Please turn page)

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Carbide Blades 24

A bulletin on tungsten carbide blades for a line of airless abrasive blast cleaning equipment is available from Wheelabrator Corp. The bulletin also lists blast wheel sizes for which the blades are available.

Heavy-Duty Trailers 25

Easton Car & Construction Co. has prepared a comprehensive catalog covering the design and construction of heavy-duty custom-built trailers for industrial yard and factory service. Capacities of these units range from 6 to over 100 tons.

Temperature Controls 26

Bulletin MC-177, eight pages, describes Thermoswitch controls and mounting wells and explains how they operate on the differential expansion of metals. The book contains complete operating specifications and connections. *Fenwal, Inc.*

Sealing Washers 27

A brochure describing Bartite sealing washers for use in industrial and construction applications where positive sealing against moisture and gases is required, is available from *Bartite Products Corp.*

Control Systems 28

A four page bulletin describing "packaged" centralized control systems for industrial processes, machine automation and heating applications is available from *Protection Controls, Inc.*

Industrial Nozzles

A 32 page catalog contains complete listings and data on all types of nozzles for industrial spraying applications. Spray angle data, dimensions, types of connections and capacity vs. pressure for all standard nozzles are presented. *Address request on company letterhead to Advertising Dept., Wm. Steinen Mfg. Co., Industrial Nozzle Div., 45 Bruen Street, Newark 5, N. J.*

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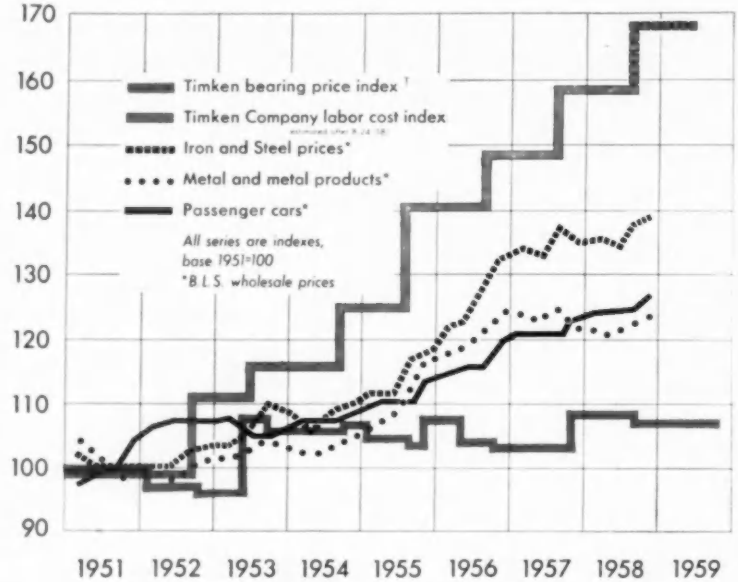
Good news for car makers! The red line on the chart at right shows how the cost of Timken® bearings for automobiles has stayed down low—while everything else has gone way up. You helped keep the cost down by standardizing on new-design Timken tapered roller bearings. The bearings made by revolutionary cost-cutting methods in our ultra-modern Bucyrus, Ohio plant (see below).



† COMPUTED FROM TOTAL VEHICLE COST OF PINION, DIFFERENTIAL, REAR AND FRONT WHEEL BEARINGS.

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More good news to come! By standardizing on still fewer bearing sizes (particularly in pinion and differential applications), auto makers can keep these machines going full tilt. By making the most of the new production techniques you will help lower production costs. Manufacturing savings can then be passed on to you. Standardize on still fewer bearing sizes and specify Timken—the bearings made by advanced mechanization—and save! The Timken Roller Bearing Company, Canton 6, Ohio. Canadian plant: St. Thomas, Ont. Cable: "TIMROSCO". *Makers of Tapered Roller Bearings, Fine Alloy Steels and Removable Rock Bits.*

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